THE IMPACT OF TYPE D PERSONALITY TRAITS ON COLLEGE STUDENTS WITH AND WITHOUT DISABILITIES CAREER READINESS

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THESIS

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ABSTRACT

We examined a total of 112 freshmen college students ranging from 17 to 20 years of age. More specifically, we looked at a sample of 50 college students that reported either physical or developmental disabilities and a sample of 60 college students without disabilities. Those who were diagnosed with psychiatric illness (n=2) were excluded from this study. In this study, the participants completed the following: demographics form, Career Thoughts Inventory and DS 14 Type D Personality assessments. Results demonstrated no significant difference based on disability status in regards to career thoughts. The presence of negative affectivity had an adverse effect on overall career thoughts, decision-making confusion, and commitment anxiety for both individuals with and without disabilities as a whole. An analysis based on group differences indicated that the presence of negative affectivity had an adverse effect on overall career thoughts as well as commitment anxiety for individuals with disabilities. Furthermore, the presence of social inhibition had an adverse effect on an individual with a disability in regards to decision-making confusion and external conflict. Results were non-significant for college students without disabilities. As a result of this study, one can conclude that career counseling interventions should be geared toward attending to affect and Type D personality over that of disability status to enhance outcomes.

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CHAPTER 1

INTRODUCTION

According to the National Center on Education and Statistics (NCES 2009), the percentage of students with disabilities graduating with a high school diploma was 57% in 2005-2006, an increase from 47% in the 1996-1997 academic year. With this growth, the number of individuals with disabilities that are currently seeking and entering higher education has risen. Although the number of college students with disabilities enrolling in higher education programs is increasing, the overall preparedness of college students with disabilities transitioning from higher education to employment has been demonstrated to be less when compared to their nondisabled counterparts. According to Americans with Disabilities Act of 1990, an individual with a disability is defined by meeting the following criteria: 1) a physical or mental impairment that substantially limits one or more of the major life activities; 2) a record of such impairment; and/or 3) being regarded as having such impairment. For purpose of this study, an individual with a disability must also be enrolled in college and receiving disability services. Research has shown that college students with disabilities on average experience an elevated degree of career dysfunction and lack of readiness for employment transition when compared to those without disabilities (Dowerick, Anderson, Heyer, and Acosta, 2005; Luzzo, Hitchings, Retish, & Shoemaker, 1999). According to a study by Stodden et al. (2005), college students with disabilities reported a general sense of increased self-confidence and marketability. Yet, they did not feel that higher education prepared them as well for the employment

transition. While students received educational credentials (i.e. a college degree), the credentials alone did not serve in aiding their transition into the workplace.

At the postsecondary educational level, one method implemented by schools or universities to act as a support system for career related concerns is the availability to a career center. Career centers have been demonstrated to be effective in helping college students in their career development process (Bond & Woodall, 1994; Lytle, 2013; Testa, 2010). However, according to Silver (1997), there is a significant difference between the guidance that individuals with disabilities received from their career service providers in comparison to their counterparts. It has been found that career centers are not equipped to serve and to advise students with disabilities because of their more unique needs and concerns (Anue &Kroger, 1997; Williams, 2008). To further complicate the matter, Hitchings et al. (2001), highlights the fact that even college students with disabilities themselves have a difficult time describing their disability and the impact that it has on their career transition needs.

The literature demonstrates that individuals with disabilities lack readiness for the transition to employment (Enright, 1996; Hitchings, Luzzo, Ristow, Horvath, Retish, & Tanners, 2001; Stodden, Dowrick, Anderson, Heyer, & Acosta, 2005). Despite the lack of readiness, gaining employment as a member of this minority group is important (Henderson, 1999; Roessler, Hennessey, Hogan & Savickas, 2009). Post-secondary education has been shown effective in increasing the general population's opportunities for employment following graduation. Because individuals with disabilities have been shown to experience greater social isolation, stigma, and financial burden in comparison to their nondisabled counterparts, it can be argued that such education is even more imperative for

this group. Several authors have noted external gains to be made through higher education; such external gains include higher salary, lower unemployment rates, and better job opportunities (Bowe 1983; Fogg, Harrington, & McMahon, 2010; Lonnquist 1979; Rosenberg 1978). In addition, research has found that work contributes to an overall sense of self-esteem and self-determination, opportunities for advancement, and opportunities for social support, all necessary components of psychological health (Bluestein, 2008; Neff, 1986).

Despite the importance of work, the employment rate for individuals with a disability in the United States is low when compared to individuals without disabilities, even following the passing of the Americans with Disabilities Act of 1990. According to a recent report from the Office of Disability Employment Policy (2011), it was indicated that 20.1% of working age people with disabilities are employed in contrast to 69.5% of those without disabilities. Furthermore, those individuals that are employed are more likely to hold a position that is part time, entry level, or minimum wage employment (Roessler, 2009; Sitlington, Frank, & Carson, 1993). With a higher education degree, one would have the credentials as well as the skill set to demonstrate their abilities, knowledge, and work ethic. With such, an employer might have a greater since of trust and place more emphasis on one's abilities rather than their disabilities (Wagner & Blackorby, 1996). While the importance of higher education for individuals with disabilities is evident, one can argue that the path of career readiness is not without its hardships.

Because of the positive impact that employment has on an individual's life in conjunction with the reported lack of readiness of college students with disabilities for the transition from higher education to employment, an understanding of career readiness in

this group of individuals is worth exploring and necessary for researchers and counselors. According to the Cognitive Information Processing model (CIP), career readiness is defined as the capability of an individual to make appropriate career and employment choices while taking into account the complexity of the contextual factors (family, SES, gender) that influence an individual's career development and employment (Peterson, Sampson, & Reardon, 1996; Strauser, Wagner, Wong, O'Sullivan, 2012). Becoming aware of career interests, goals, skills, and talents is often termed as vocational identity (Holland, Daiger, & Power, 1980). Prior research studies have found vocational identity to be correlated with career indecision, a major component of being "career ready." According to Holland and Holland (1977), identity and vocational maturity appeared to be the primary differentiator of decided and undecided individuals. Therefore, a key component of assessing an individual's career readiness involves the assessment of readiness for career decision-making.

Results from research done by Enright (1996), found that there is a relationship between certain types of career beliefs and career indecision. Specifically, studies have found that beliefs reflecting self-doubt or a lack of confidence impair a person's ability to reason logically, which results in poor decision-making. Other research validates the proposed relationship between self-doubting beliefs and career indecision. Taylor and Betz (1983) found a strong, inverse correlation between career indecision and career decision-making self-efficacy statements involving a lack of confidence and structure regarding career decision.

When considering the transition process throughout one's college experience there is a host of possible changes that result from the opportunities or lack of opportunities

during their time as a student. Literature on the transition to college experience indicates that higher education involves a series of changes and transitions that influence student growth beginning in the freshmen year and continuing through graduation (Chickering, 1969; Peters, 2012; Rosenbaum & Becker, 2011). Transition can be defined as "a change in one's behaviors or relationships in response to the occurrence of an event or non-event that affects both one's beliefs about oneself and the world" (Schlossberg, 2011). As challenging as transitioning can be for all students, it is even more challenging for those with disabilities. Individuals with disabilities tend to face a greater number of barriers when it comes to how they perceive themselves and the world. As a result, this transition period during college could be a vulnerable one for individuals with disabilities. In return, one could argue that this vulnerability has the potential to influence the students' opportunities or lack of opportunities for career development throughout their experience in college.

On average, people with disabilities report increased levels of psychological distress than those without disabilities (Burchardt, 2003; Choi and Marks, 2008). Having a disability can have a negative impact on an individual's life: it could create stress, depression, pessimistic attitudes, serious feelings of inferiority, and a sense of dependence (Bakheit & Shanmugalingam, 1997; Werner, 2012); Thus, one can argue that making an appropriate career and employment choice becomes very complex. Often, people with disabilities encounter overprotection, lower expectations, and a host of external influences including negative societal attitudes that result in a less than ideal circumstance for career development opportunities. Furthermore, it has been found that individuals with disabilities tend to rely on others for decision-making; further threatening the capability of

an individual with a disability making their own career choices. This may not always be sustainable nor will it lead to successful adult independence (Luftig & Muthert, 2005;Phillips, Strohmer, Berthaume, & O'Leary, 1983).

Individuals with disabilities often experience overprotection from parents and/or other family members. When parents and family overindulge or overprotect their child/children with a disability, they take away an experience that typically enables a child to be successful in life (Sanders, 2006; Yura, 1983). Overprotection deprives an individual of a sense of independence as they transition into adulthood and it inadvertently promotes dependence on others. The repercussions of overprotection include lower self-esteem, feelings of being less capable, and reduced opportunity for growth (Smart & Smart, 2006; Smart, 2001). Overprotection can also play a role in an individual's capability to make decisions on his or her own. This becomes especially important when considering the transition from college to employment.

Moving from an environment where students are carefully guided by school staff (secondary education) to an environment where they are expected to achieve and make decisions on their own (post-secondary education) can be a difficult transition for an individual who has been overprotected and decisions have been executed by their parents and/or family members (Dalke & Schmitt, 1987; Roessler, 2009). According to a study by Smith, English, and Vasek (2002), freshmen college students reported via a survey that they feel good about themselves, but they were dependent on their parent's input and guidance to stay on track and make decisions. This points to the importance of ensuring adequate transitioning from parent advocacy to student self-advocacy in order to enhance the career readiness process beginning with the freshman year of college.

Lower expectations also play a potential part in inhibiting the career development process. When it comes to individuals with disabilities, lowered expectations may take the form of sympathy, kindness, or generosity, but they can be quite detrimental to the individual by limiting the amount of constructive feedback that one receives throughout life. According to Smart (2001), this lack of constructive feedback keeps the individual inferior and dependent. Lowered expectations can follow a student into post-secondary education. These students are challenged in college and struggle because they have not had the experience of expectations that were needed to succeed in school. As a consequence, the individual might begin to believe their disability is the root cause of his or her incompetence, which may or may not be the case (Sanders K. , 2006). Vocational prospects and educational opportunities are affected by the low standards that one sets for themselves.

Societal attitudes and perceptions toward individuals with disabilities have the capability of acting as a support or hindrance to the career planning process. Public attitudes toward individuals with disabilities have significantly evolved in the past few decades due to social change and the way in which disability is defined (Daruwalla, 2005). However, negative attitudes (prejudice and discrimination) still exist within society in regards to individuals with disabilities. Studies have demonstrated that a host of internal and external factors such as demographic variables (age, sex, ethnicity, education, socio-economic status, education, etc.) and contact with people who have disabilities are related to the attitude that individuals in society hold toward someone with a disability. These factors have the possibility of even further complicating the prejudice and discrimination that an individual faces (Tervo & Palmer, 2004).

Individuals who experience these pervasive negative attitudes often experience feelings of worthlessness and inadequacy. As a result of this chronic exposure to prejudice and discrimination, the person is more likely to develop a negative sense of self (Gerber, 1991; Price, Johnson, & Evelo, 1994; Smart & Smart, 2006). In turn, this will contribute to lower vocational aspirations, underachievement, and limited career options. Dysfunctional cognitions inhibit and discourage people from exploring alternatives and actively seeking information, opinions, and advice that is often seen as an aid to career commitment. Such dysfunctional cognitions have been identified and consistently documented in college students in general (Corbishley & Yost, 1987; Osborn, Saunders, & Wilde, 2014); imagine the greater degree of impact they could have on individuals with disabilities. Attitude barriers result in reduced career expectations and limited opportunities in the educational setting. Internalization of discrimination causes the person with the disability to believe that they are capable of less. Therefore, it becomes difficult for one to be in a place to make career decisions.

Evidence suggests individuals with disabilities often experience diminished vocational outcomes in comparison to individuals without a disability. To this point, much of the research reveals a lack of career readiness as a major concern in one's ability to fluently transition into the workplace following post-secondary education. However, little has been examined in regards to the personality factors associated with the impaired career functioning (thoughts and decision-making) in college students with disabilities. One personality type that may potentially impact dysfunctional career development is Type D personality traits. The study of Type D "distressed" personality originated in the medical literature as a construct that negatively impacts chronic health conditions ranging from

cardiovascular conditions, arthritis to malignant melanoma (Polman, Borkoles, & Nicholls, 2010).

Theoretically, Type D personality it is posited to be a stable heritable personality trait consisting of two distinct constructs: negative affect and social inhibition. An individual with elevated levels of Type D personality tend to experience increased negative emotions while in the same instance is found to inhibit those negative emotions in social circumstances (Klaassen, Nyklíček, Traa, & Nijs, 2012). This type of person tends to inhibit their negative emotions as a means of avoiding disapproval or rejection. Research has found that patients with Type D personality have an increased risk of psychological distress and adverse clinical health status. Polman et al. (2010) studied a sample of undergraduate students and found that Type D personality was associated with increased exhaustion and disengagement. Flourtje & Denollet (2010) found that Type D personality contributes to lower work-related outcomes (e.g. higher burnout, higher work-related stress, substantial problems in interacting with supervisors and coworkers). An understanding of the impact of Type D personality traits on career readiness is needed in order to better understand the potential risk factors associated with dysfunctional career thoughts and employment outcomes for individuals with disabilities.

Significance of the Problem

The amount of students with disabilities engaging in higher education has grown dramatically over the past decade, as has the importance of post-secondary education. As a result of obtaining higher education, individuals with disabilities have been able to obtain not only more employment opportunities but also better quality employment

opportunities (Strauser, 2014; Wagner & Blackorby, 1996). With such, a positive correlation between disability, post-secondary education, and employment has been well established. Furthermore, the importance of work has been established as well. Work contributes to an overall sense of self-esteem and self-determination, opportunities for advancement, and opportunities for social support, all necessary components of psychological health (Bluestein, 2008; Neff, 1986).

Despite this positive relationship and importance of work, the overall employment rates remain significantly lower for individuals with disabilities in comparison to their counterparts (Sitlington, Frank, & Carson, 1993; Strauser, 2014). From the perspective of the employer, much concern in regards to hiring individuals with disabilities involves not feeling confident that the individual possesses adequate knowledge and experience. Furthermore, there is apprehension toward determining the appropriate support and accommodations necessary to aid the potential employee in their everyday work activities (Chan F. , Strauser, Maher, Lee, Jones, & Johnson, 2010).

When reviewing the literature on transitional concerns that college student's encounter when entering the workforce, a lack of readiness and career indecision is exposed. Hitchings et al. (2001) examined a group of undergraduate students with disabilities who reported feeling unprepared to meet the needs of their future job based of their college experiences with work and academics. Others demonstrated a lack of self-awareness in regards to identifying appropriate accommodations to support their future employment; some students even had difficulty in describing their disability.

As a result of their disability, individuals often experience greater psychological distress and diverse psychological adaptation outcomes than individuals without a

disability (Choi, 2008; Mandemakers & Monden, 2009). Age of onset can have significant impact on the adjustment process and also impact career and work behavior (Strauser, Wagner, Wong, & O'Sullivan, 2012). Research has demonstrated that as a youth with a disability one is at higher risk for experiencing lower levels of social and emotional well-being. As previously mentioned, such individuals are often overprotected, given lowered expectations, and experience pervasive negative attitudes starting at a young age. Strauser et al. (2012) looked at age of onset and found that young adults with disabilities reported elevated scores related to managing external and contextual factors as they pertain to career problem solving and decision-making. Thus, the transition into the unknown of the next life role, employment, might be more complex and deserves attention.

Little is known about the personality factors associated with impaired career functioning and the transition into employment in college students with disabilities. One personality type that has the potential to impact career functioning is personality D. Type D personality has been shown to be related to poorer quality of life namely in emotional functioning, exhaustion, and work related stress as compared to those without Type D personality traits. Given that Type D personality is a construct linked to poor health outcomes irrespective of disability status, it seems even more important to consider in regards to an individual with a disability who is already at a greater threat for psychological distress due to their disability status. One can hypothesize that Type D personality could serve as a potential risk factor for college students with disabilities in their process of developing career readiness and preparing to enter the workforce as a productive member of society.

Purpose of Study

The purpose of the study is to investigate the impact of Type D personality traits has on both college students with and without disabilities perceived career readiness. The first goal of this study is to examine the differences in the levels of career thoughts between college students with disabilities and college students without disabilities. It is hypothesized that college students with disabilities will have significantly higher levels of dysfunctional career thoughts when compared to college students without disabilities. In addition, I am interested in exploring whether Type D personality traits contribute to predicting both college students with and without disabilities career thoughts as a whole. It is hypothesized that Type D personality traits will result in elevated levels of dysfunctional career thoughts for college students with disabilities and without disabilities as a group. Moreover, I am interested in exploring whether Type D personality traits contribute to predicting both college students with and without disabilities career thoughts separately. It is hypothesized that Type D personality traits will result in elevated levels of dysfunctional career thoughts for college students with and without disabilities.

This project is significant because findings could potentially lead to initial evidence for career counseling interventions to attend to Type D personality traits as a risk factor for dysfunctional career thoughts with the goal of improving the vocational services and outcomes for college students with disabilities. Furthermore, an understanding of college students with disabilities Type D personality traits may enhance intervention methods by providing knowledge of potential psychosocial concerns to be addressed in order to decrease potential work-related problems when they enter into the workforce. The following research questions will guide this study:

1. Are there differences between college students with disabilities and college students without disabilities on their career thoughts?
2. Do Type D personality traits contribute to predicting career thoughts for college students overall?
3. Do Type D personality traits contribute to predicting career thoughts for college students with disabilities and/or college students without disabilities individually?

Definitions

Career Center

One mechanism implemented by schools or universities to address career related concerns is providing students with access to a career center. According to Schutt (1999), the role of a career center is to "support and empower individuals to create and use personally meaningful career paths." Moreover, the career center serves to provide students with practical information that can supplement in one's career exploration process and in their development of plans for transitioning from school to the workplace (Hammond, 2001).

Career readiness

The term career readiness is defined as the capability of an individual to make appropriate career and employment choices while taking into account the complexity of the contextual factors (family, SES, gender) that influence an individual's career development and employment (Peterson, Sampson, & Reardon, 1996; Strauser, Wagner, Wong, O'Sullivan, 2012). A person who is in a higher state of readiness has the necessary cognitive capacity and positive affective state to make career choices. On the contrary, those who are less

ready are inhibited by dysfunctional thoughts and negative emotions (Saka, Gati, & Kelly, 2008).

Career thoughts

Career thoughts are conceptualized on a continuum from functional to dysfunctional. The way in which one is thinking about their career plays an important role in an individual's career decision-making process and vocational development. Some people verbalize their dysfunctional statements resulting in a more difficult decision-making process (Osborn, Saunders, & Wilde, 2014).

Career Thoughts Inventory (CTI)

A measure based on the cognitive information processing theoretical approach to career development and career services (Osborn, Saunders, & Wilde, 2014; Peterson, Sampson, & Reardon, 1991) and a cognitive therapy approach to mental health and mental health services (Beck, 1976; Beck, Rush, Shaw, & Emory, 1979). For the purpose of the instrument, three types define dysfunctional career thoughts: First, an individual can be challenged by the initiation or maintenance of the career decision-making process because of emotional barriers or difficulty in understanding how to make a decision (decision-making confusion). Second, an individual might have a difficult time committing to a career choice because of he anxiety associated with the outcome (commitment anxiety). Third, a person might have problems integrating the opinions of others with their own ideas about potential career choices (external conflict).

Cognitive Information Processing (CIP) Model

This model is represented by a pyramid of information processing domains including self-knowledge, occupational knowledge, decision-making skills, and executive processing

(Osborn, Saunders, & Wilde, 2014). According to the CIP approach, in order to be effective in career problem solving and decision-making one must be capable of effective information processing in these domains.

Disability

According to the Americans with Disabilities Act (1992), a disability is defined by meeting three criteria: 1) a physical or mental impairment that substantially limits one or more of the major life activities; 2) a record of such impairment; and 3) being regarded as having such impairment. For purpose of this study, an individual with a disability must also be enrolled in college and receiving disability services.

Transition

Transition is defined as "a change in one's behaviors or relationships in response to the occurrence of an event or non-event that affects both one's beliefs about oneself and the world" (Schlossberg, 2011). Literature on the transition to college experience indicates that higher education involves a series of changes and transitions that influence student growth beginning in the freshmen year and continuing through graduation (Chickering, 1969; Peters, 2012; Rosenbaum & Becker, 2011).

Type D personality

The term Type D personality is known to be a stable heritable personality trait consisting of the two distinct constructs: negative affect and social inhibition. It is considered "distressed" personality (Klaassen, Nyklíček, Traa, & Nijs, 2012). An individual with elevated levels of Type D personality tend to experience increased negative emotions while in the same instance is found to inhibit those negative emotions in social circumstances

(Klaassen, Nyklíček, Traa, & Nijs, 2012). This type of person tends to inhibit their negative emotions as a means of avoiding disapproval or rejection.

CHAPTER 2

LITERATURE REVIEW

Making a career choice is one of the main psychological tasks that a college student must face. They feel pressure to make educational and career decisions that have significant implications for their future lifestyle, personal and occupational satisfaction (Beauchamp & Kiewra, 2004). Thus, the college journey that most students undergo will impact the outlook for the remainder of their life. There are a host of challenges that college students face upon entering school, one being choosing a career. Making a career decision is a complex task and will vary between person-to-person. Some individuals will have an easy time during the decision-making process while others will encounter great difficulty throughout the process whether it is at the beginning, middle, or the end. If such difficulties are not addressed, it may inhibit one's ability to make a decision or lead to a decision that is undesirable. Individuals with minimal decision-making skills will likely face more negative consequences. Therefore, identifying and addressing an individual's career decision-making difficulties is a step toward providing them with the career guidance they may need.

At the post-secondary education level, one mechanism implemented by schools or universities to address career related concerns is providing students with access to a career center. According to Schutt (1999), the role of a career center is to "support and empower individuals to create and use personally meaningful career paths." Moreover, the career center serves to provide students with practical information that can supplement in one's career exploration process and in their development of plans for transitioning from

school to the workplace (Hammond, 2001; Roessler, 2009). As previously stated, the career development process is a pertinent step towards gaining employment. However, this process does not come without its challenges for individuals with disabilities. While colleges prepare most students for the transition from school to work, the literature indicates that this does not hold true for individuals with disabilities.

One study conducted by Silver (1997) examined areas including services provided, employment history, experiences with faculty, and recent employment opportunities. The authors surveyed forty-seven undergraduate students with disabilities at post graduation. The results revealed a significant difference between the guidance that individuals with disabilities received from their career service providers in comparison to their counterparts. Furthermore, the study showed differences in the selection of majors. More specifically, it was found that career counselors discouraged students with disabilities from selecting certain career paths because of their disability. This provides major challenges for these college students in their career decision-making process. The authors suggest that students with disabilities need to be encouraged to select careers that are of interest to the individual and not limit themselves as a result of their disability. They also note the lack of the use of career services in general at the college level and the need to engage in more research in this area.

Another study's goal was to determine the major problems of college students and their access to services. Anue and Kroger (1997) found that those serving individuals with disabilities were not equipped to advise the students because of their more unique needs and concerns. Because of this lack of knowledge in serving students with disabilities, it was found that the students were sent to the disability resource services instead of being served

at the career center. As a result of the study, the authors concluded that career services could be improved by increasing the awareness of external and internal factors that play a role in this population's needs. Moreover, it was suggested that career services be tailored for this group.

Because there is a lack of awareness in regards to serving this population and their career needs as well as the lack of tailored programs for this group, students with disabilities are not as prepared for making decisions in employment or for the careers that they pursue. Often there is a lack of job goals, experience with employment, and job preparedness skills such as ability to articulate their abilities and skills, their needs in terms of accommodations, and their confidence in their ability to perform a job. Williams (2008) states that a component of being a career counselor should include training in understanding the unique needs of this population. With such, counselors could make more appropriate job referrals and be able to express to potential employers the necessary accommodations for the individual.

A study by Dowerick, Anderson, Heyer, and Acosta (2005), examined the experiences of adults with disabilities pursuing post-secondary education. Focus groups were conducted in ten states to explore the barriers to accessing support for current education and future employment. Participants indicated that disability services were a good support but were understaffed and only able to serve those in dire need. Moreover, they stated that disability services offered an array of supports but most people were unaware of these supports and therefore lacked access to them. Participants expressed that while internships were offered as a means of preparation for a future career, many positions were not accessible. Furthermore, students reported that negative attitudes

toward their disability status served as a barrier to success in college as well as obtaining employment following their post-secondary education. Even though, students felt more marketable with their post-secondary education they indicated that overall they were not prepared for employment.

Hitchings, Luzzo, Ristow, Horvath, and Tanners (2001) studied ninety-seven undergraduate students from three post-secondary schools by a semi-structured interview. When asked to describe the impact that their disability will play in terms of accommodations for their future job, students had a difficult time describing their problems. Moreover, when pressed about their transition into employment one-third stated that they would definitely experience difficulty in their future career. The students described this knowledge of difficulty as a result of the coursework they have taken and the internship positions they held. Another group of participants (26.8%) believed that they would have problems with their job and that they might need accommodations to meet their career goals. A smaller amount (13%) stated they would not have any problems with their future career. The remainder of the participants (53.6%) said that they were not sure what would happen after entering their career.

The literature points to a lack of career services with a focus on the unique needs of this population as well as the lack of career transition preparation as vocalized by students with disabilities. To further complicate this matter, much of the literature identifies the attitudes and perceptions experienced by employers as another barrier to the fluent transition from college to the workplace.

According to Chan, Strauser, Gervey, and Lee (2010), employers tend to have a number of negative perceptions when it comes to employing individuals with disabilities.

Some of those perceptions include that a person with a disability lacks maturity and has insufficient social skills. Moreover, an individual who is disabled possesses poor mental health, which will result in the person taking situations or comments personally (Fong Chan et al., 2010). Consequently, employers feel that integrating individuals with disabilities into the employment setting is difficult and may create negative feelings and low moral among co-workers.

Supplementary to employers' negative perceptions are concerns of hiring individuals with disabilities. First, employers tend to worry about whether individuals have the ability to meet productivity standards. More specifically, the employer wonders whether such individuals will need special treatment on the job and in the workplace. In addition, the employer doesn't know if an individual with a disability has the ability to meet their quality and quantity standards. Lastly, there is the concern that the individual will have low physical stamina and poor cognitive functioning (Fong Chan et al., 2010). The overall apprehension is that an individual with a disability will lower the company's production standards and result in a need for additional supervision.

Likewise, employers feel that they have inadequate knowledge and understanding of how to hire and retain individuals with disabilities. They are unaware of effective methods of interviewing individuals with a disability and/or other health care issues that may come along with a disability. There is a lack of information regarding disability legislation and exposure to people with disability and chronic health conditions in the work environment. Finally, employers are deficient of knowledge of how to communicate with individuals who possess a disability (Ziv Amir, 2009).

In summation, the literature on career services in higher education indicates a lack of knowledge in terms of the unique internal and external needs of individuals with disabilities when it comes to their career development process. This lack of knowledge also permeates among employers contributing to disproportional hiring rates of individuals with disabilities as compared to their counterparts. Furthermore, there is limited research on the career development process for college students with disabilities despite the importance of engaging in the career decision-making process.

Because of the impact that making a career decision has on one's future life outlook, many authors have dedicated their scholarships to the art of career decision-making since the early 20th century. Frank Parsons, also known as the founder of the vocational movement, proposed one of the first career decision-making theories in 1909 in his book "*Choosing a Vocation*." His model promoted a rational orientation that emphasized a "talent-matching" approach. This talent-matching approach consisted of three components: self-understanding, knowledge of occupation, and true reasoning. According to his theory, an individual must have an accurate understanding of their abilities, interests, and other personal traits. Second, the person needs accurate knowledge of jobs and the labor market. Third, the individual should be able to have a rational judgment of their traits and the labor market as well as the relationship between the two (Parsons, 1909).

In 1951, Ginzberg, Ginsburg, Axelrad, and Herma became the first vocational theorist to posit that career decision-making was a process involving the whole person and development of career decisions over time. According to their theory, career decision-making occurs in phases: fantasy, tentative, and realistic and within each of theses phases are sub phases (Ginzberg, Ginsburg, Axelrad, & Herma, 1951). *Fantasy* takes place in

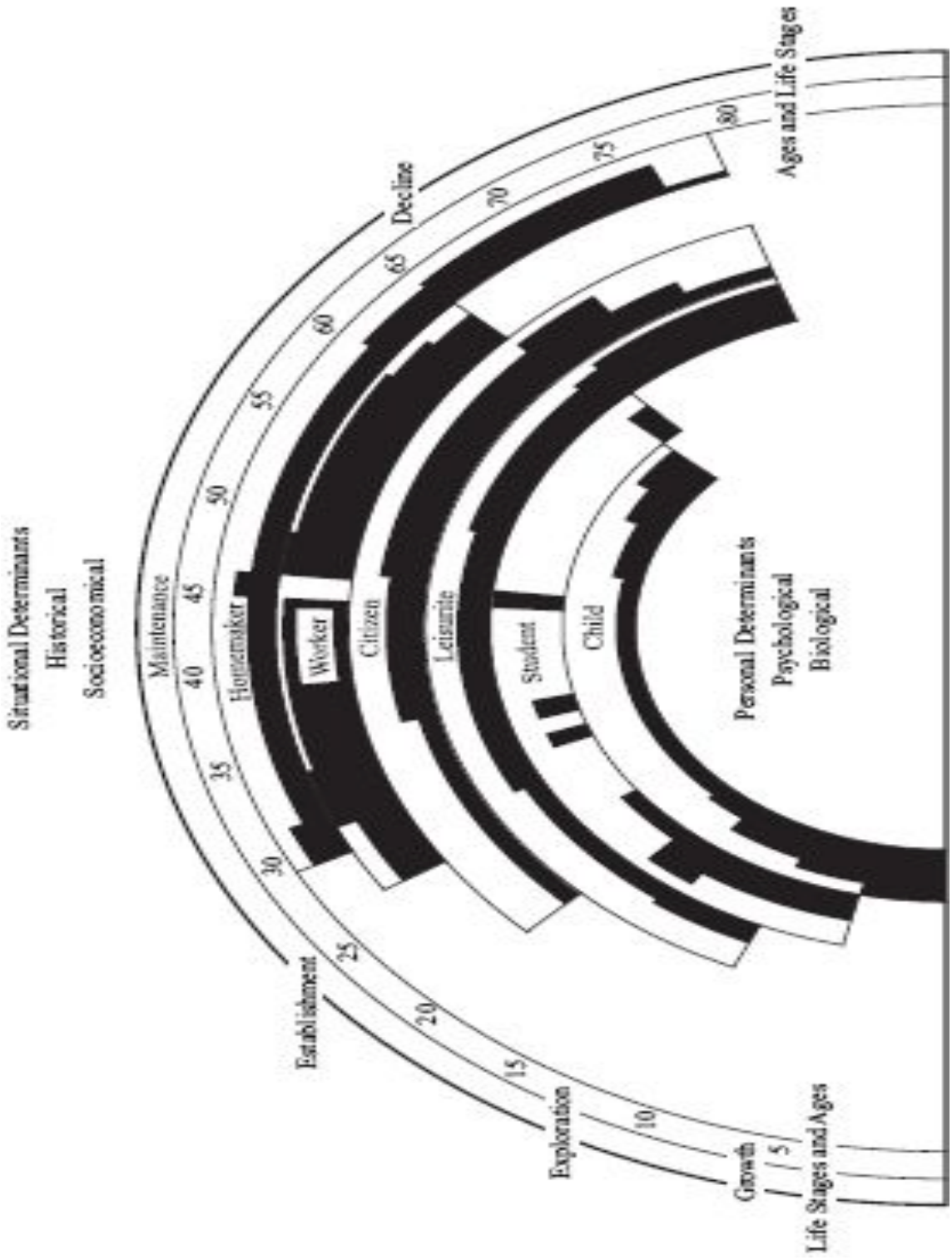
childhood until 11 years of age. At this time, individuals are considering what they want to be when they become an adult. The *tentative* stage is when the person begins to identify *interest* (11 or 12), acquires an awareness or *capacity* of their abilities (13-14), determines their *values* or desire for occupational lifestyle (15-16), *transitions* (17 or 18) or becomes aware of their decision for making an occupational choice. The third stage, *realistic,* is when a person *explores* the occupations they are interested in, *crystallizes* the occupation of choice through commitment, and *specifies* the training they need to obtain the occupation (Stitt-Gohdes, 1998). According to Ginzberg (1984), career decision-making is a balance of one's interest and values as well as the available opportunities and one's personal abilities.

Also in the mid-20th century, Donald Super contributed a developmental theory to the field consisting of a dynamic five stage process extending from childhood to retirement age. According to Super's theory, career development is strongly connected to an individual's personal maturation process; as one evolves so does the demands and expectations of their work environment (Herr & Cramer, 1996). Super described work as a sum of all the roles we play in our life and illustrated this via his Life Career Rainbow as seen in figure 1. Furthermore, as many other theorist advocate, Super believed in the importance of a person-environment fit.

His five stages consisted of the following: growth, exploration, establishment, maintenance, and decline. More specifically, his *growth* stage began in childhood spanning from 0-14 years of age. According to the theory, individuals during this time hold stereotypical views about career options and are influenced by gender identity. Following this stage is *exploration* stage spanning from 15-25. At this time, an individual is able to identify a suitable career and commit to it by studying the field or working in the area. The

next stage is *establishment* (ages 25-44), which is considered the time when one is concentrating on advancing in their field (Hurley-Hanson, 2006). *Maintenance* is the age span of 44-64 and the time when one puts energy into maintaining one's place in their occupation. The final stage is known as *disengagement*. Disengagement is during retirement and is viewed as one's transition from a life of work to a life outside of the purpose they serve in their career (Super D. , 1957). While super's theory was first presented during a time when people chose a job and remained in that position for their whole life, he later acknowledged that the stages can be overlapping; some people may revisit certain stages during a time of career change. Moreover, he later placed importance on adaptability rather than maturity explaining the need to continue to explore and develop skills and information when changes arise (Cairo, Kritis, & Myers, 1996).

Figure 1. Super et al. (1996, p 127)



One of the most well-known career decision-making theorists of all time is John Holland. According to Holland's theory (1963), individuals make career choices and find positive career adjustment based off their interactions with their environment. More specifically, the theory describes how a person's characteristics or personality type impact their environment as well as how the make up and demands of the environment type impact the individual. Thus, the person and the environment model maintain a bidirectional relationship. Upon analysis of vocational interest, Holland believes that interest is based off our personality. In other words, personality is an expression of our interest. Therefore, identification of one's interest can provide a useful canvas of his or her personality type.

Holland posits that six personality or interest types can characterize people: Realistic (R), Investigative (I), Artistic (A), Social (S), Enterprising (E), and Conventional (C). Briefly, *realistic* people enjoy jobs that are practical, require manual manipulation of objects, and within institutional restraints. People with *investigative* interests like work activities that have to do with ideas, thinking, and gathering information. *Artistic* people enjoy work activities that deal with the artistic side of things, such as forms, designs, and patterns. *Social* people like work activities that assist others and promote learning and personal development. An individual with *enterprising* interests likes work activities that have to do with starting up and carrying out projects, especially business ventures. *Conventional* people enjoy work that follows set procedures and routines, require organizational skills and rules (Gottfredson & Duffy, 2008).

The theory states that most people resemble more than one personality type and in some cases all of the types to some degree (Holland, 1963). Each individual is a composite

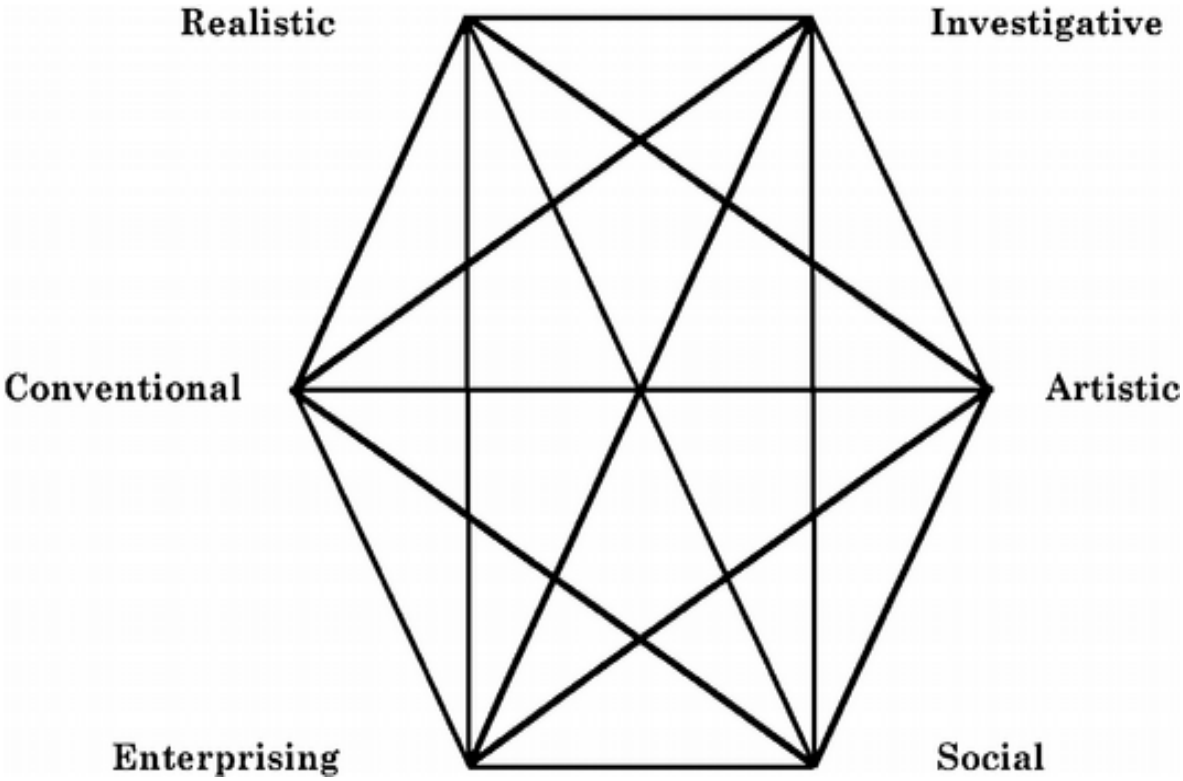
of several of the types. However, for assessment and intervention purposes, an individual's top three personality types are used to define what is known as the three-letter code, or summary code. When individuals obtain similar codes, it is common that such people hold similar vocational partialities and excel in like environments. The types demonstrate characteristic behavioral repertoires, patterns of likes and dislikes, specific values, and unique self-descriptions.

Holland argues that personality types develop from activities to dispositions as seen in Figure 2. Preferred activities result from the initial global activities that characterize infants. Furthermore, a heredity component is assumed to affect the choice of activity and the chances of that activity being reinforced (i.e., one's gender will affect his or her participation in a sport, football versus cheerleading) (Holland, 1963). Conclusively, a child's early activities inform their long-term interest and competency areas. Thus, the experience leads to a person who is predisposed to demonstrate a distinguishing self-concept and outlook and to obtain a characteristic disposition.

In Holland's model, the loops with arrows show that personality types have the capability of becoming more differentiated or distinct over their life-span as well as how a person can change to become more like one type than another (Gottfredson & Duffy, 2008). An example of someone becoming more differentiated would be a realistic person becoming more realistic with age because they experience a continuous number of activities that involve Realistic characteristics over their lifetime. As a result, that person further develops realistic skills. On the other hand, a person can change to become more like one type than another over time too. For instance, someone who is a realistic type could get a job that is more investigative, whether it is forced or by choice, and through that

job they acquire new skills and competencies in the Investigative area. This is one way that a person can shift in their disposition.

Figure 2. Holland's Hexagram

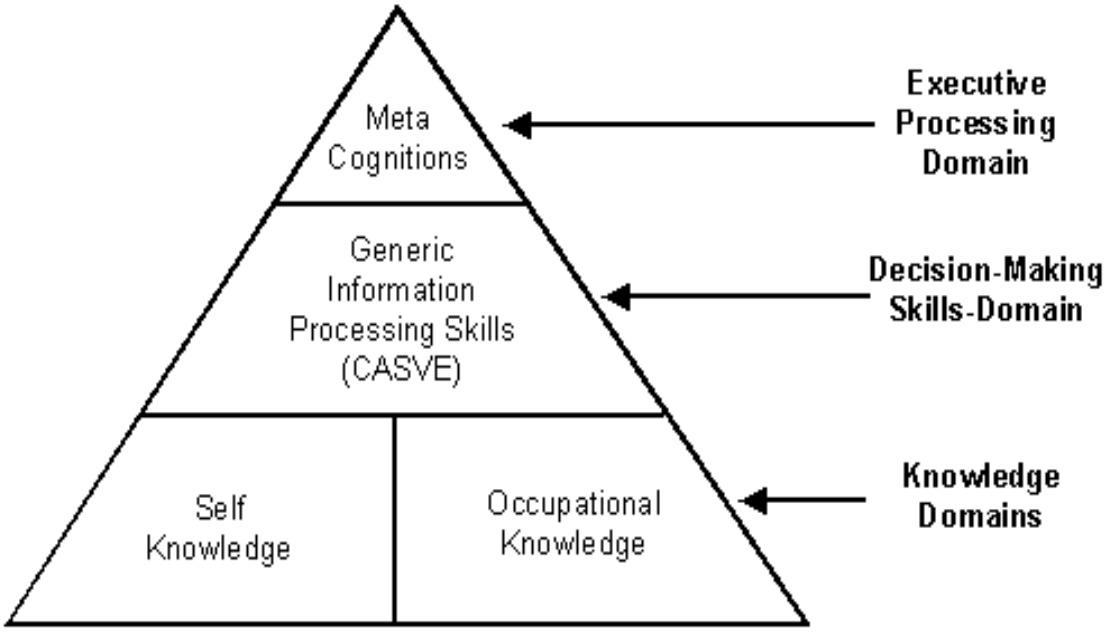


Decades of research on career decision-making have included a focus on career indecision. Career indecision is a construct that refers to problems that emerge during the career decision-making process (Brown & Rector, 2008; Osipow, 1999). Research has demonstrated that individual's capability to make decisions expand across a continuum (Sampson, Peterson, Reardon, & Lenz, 2004). As a result of this research, it has been found that one key component of assessing an individual's career decision-making needs is one's readiness for career decision-making (Sampson, Peterson, Lenz, Reardon, & Saunders, 1996b). There are a number of available measures that have been developed to assess one's readiness. One more recent theoretical model that has been developed by scholars is

known as the Cognitive Information Processing (CIP) approach (Osborn, Saunders, & Wilde, 2014). This model is represented by a pyramid of information processing domains including self-knowledge, occupational knowledge, decision-making skills, and executive processing (see Figure 3). According to the CIP approach, in order to be effective in career problem solving and decision-making one must be capable of effective information processing in these domains.

The base of the pyramid of informational processing is composed of self-knowledge and occupational knowledge domains. Self-knowledge can be defined as one's perceptions of their personal interest, values, skills, etc. Occupational knowledge is one's awareness of the organization of the world of work. Moreover, it is having knowledge about the specific options for work as well as concrete perceptions of various careers (McLennan & Arthur, 1999; Osborn, Saunders, & Wilde, 2014). The middle of the pyramid is the decision-making domain, which focuses on one's skills to recognize a problem and make decisions toward implementing a solution. The decision-making process is conceptualized through what is known as the CASVE cycle. This cycle includes five sequential phases: Communication, Analysis, Synthesis, Valuing and Execution (Lerkkanen, Sampson, Peterson, & Konttinen, 2012). Finally, at the acme of the pyramid is the executive processing domain. This domain considers metacognitions including self-talk, self-awareness, and monitoring and control used by an individual to help solve a career related issue (Peterson, Sampson, & Reardon, 1991).

Figure 3. Cognitive Information Processing Model



According to the CIP approach, readiness is defined as the capability of an individual to make appropriate career choices while considering the complexity of family, social, economic, and organizational factors that impact an individual's career development and employment. (Osborn, Saunders, & Wilde, 2014) More specifically, capability refers to the cognitive and affective capacity that an individual possesses in order to engage in effective career problem solving and decision-making. A person who is in a higher state of readiness has the necessary cognitive capacity and positive affective state to make career choices. On the contrary, those who are less ready are inhibited by dysfunctional thoughts and negative emotions (Saka, Gati, & Kelly, 2008). In terms of complexity, this refers to external factors such as family, finances, society etc. that make it either more or less difficult to process information to solve career problems and make decisions. Individuals with higher

readiness have fewer external concerns that negatively impact their career and employment problem solving and decision-making than individuals in lower states of readiness (Sampson, Reardon, & Lenz, 2004).

In order to measure the capability dimension of readiness within the CIP approach for career decision-making, the Career Thoughts Inventory (CTI) measure has been used frequently within research. This measure looks at the following components: decision-making confusion, commitment anxiety, and external conflicts. Several studies in the U.S. have reported on the reliability and validity of this measure. Negative career thoughts were found to be inversely correlated with positive constructs such as vocational identity, certainty, and knowledge about occupations and training in the original validation of the CTI scores. Furthermore, negative career thoughts were positively correlated with indecision for three norm groups including adults with work experience, college students, and high school students (Sampson, Peterson, Lenz, Reardon, & Saunders, 1996b). When high school students were compared to college students, it was found that college students' negative career thoughts were inversely correlated with choice comfort and decisiveness, and positively correlated with depression.

A great deal of research has examined the role of cognition in career decision-making. Career thoughts are conceptualized on a continuum from functional to dysfunctional. The way in which one is thinking about their career plays an important role in an individual's career decision-making process and vocational development. Some people verbalize their dysfunctional statements resulting in a more difficult decision-making process. The Career Thoughts Inventory measure defines dysfunctional career thoughts into three types (Sampson, Peterson, Lenz, Reardon, & Saunders, 1996b). First, an

individual can be challenged by the initiation or maintenance of the career decision-making process because of emotional barriers or difficulty in understanding how to make a decision. Second, an individual might have a difficult time committing to a career choice because of he anxiety associated with the outcome. Third, a person might have problems integrating the opinions of others with their own ideas about potential career choices.

Saunders, Peterson, Sampson, and Reardon (2000) investigated the role that dysfunctional career thinking played in the career decision-making process. The data was collected from two hundred and fourteen college students and analyzed using a hierarchical multiple regression analyses. Based off the analyses, the authors concluded that dysfunctional career thoughts were a significant component in career indecision. Suggestions for further research included the need for practitioners to explore and address the dysfunctional career thoughts that each individual student may be experiencing.

When career thoughts were examined by Strauser, Lustig, Cogdal, & Uruk (2006), they conducted a study investigating the relationship between trauma symptoms and the career development process of 131 college students. One of the questions analyzed was is there a difference in career thoughts for individuals who report high levels of trauma symptoms when compared with persons who report lower levels of trauma symptoms. To determine whether there was a difference between the various participants a one-way analyses of variance (ANOVAs) was conducted on the continuous variables of career thoughts including decision-making confusion, commitment anxiety, and external conflict. Results indicated that trauma symptoms had a significant correlation with the CTI-Total (r-.45, $p < .01$), the CTI-Decision-making Confusion (r=.41, $p < .001$), the CTI-Commitment Anxiety (r= .42, $p < .001$), and CTI-External Conflict (r= .41, $p < .001$). Thus, trauma-related

symptoms were found to be related to negative career thinking. Results suggested that career counselors should be familiar with PTSD symptoms and be able to work with the client on possible coping skills and stress reactions, decision-making skills, potential medication issues, and assertiveness training and conflict resolution.

Kleiman et al. (2004) studied the relationship between the two measures: Career Thoughts Inventory (CTI) and the Career Decision-Making Difficulties Questionnaire (CDDQ). Furthermore, they examined individual's degree of decidedness in regards to their career plans. One hundred and nine females and ninety-three male university students participated in this study. Results from the study demonstrated first that both the CTI and CDDQ measures were successful at identifying individuals at various stages in their career development process. Moreover, results suggested that lower levels of dysfunctional career thoughts were associated with higher levels of career decidedness. The authors discussed that the next step to research is to develop interventions that increase an individual's readiness and identifying specific suggestions for working with each individual's particular difficulties including dysfunctional cognitions.

Chartrand, Rose, Elliott, Marmarosh, and Caldwell (1993) examined career thoughts by looking at the impact of personality dispositions on career decision-making styles and antecedents of career indecision. With the use of a college student sample consisting of two hundred and forty nine undergraduates from a university, these authors found that the personality trait, neuroticism, was associated with career decision-making style and affective antecedents to career indecision. Results suggested that interventions should focus on managing negative affectivity as well as cultivating further self-control and confidence within individuals in order to have more effective career decision-making skills.

Another study sought to understand the affect that the Big Five personality factors and negative career thoughts played in one's decision-making self-efficacy. Bullock- Yowell, Buzzetta & Andrews (2011) findings revealed that career decision-making self-efficacy was positively correlated with all Big Five personality factors. Moreover, it was negatively correlated with dysfunctional career thoughts. A multiple regression analysis revealed that the personality traits conscientiousness and openness along with negative career thoughts explained a significant degree of variance in the construct decision-making self-efficacy. Based off these findings, the authors suggested not only being aware of dysfunctional career thoughts but also being more aware of the personality factors that individuals possess when developing an appropriate career intervention. Moreover, these findings revealed that certain personality characteristics and negative career thoughts contribute to the lack of readiness in college student's career decision-making process.

Research on dysfunctional career beliefs and career decision-making in college students is fairly saturated. However, such research with a focus on college students with disabilities has been explored to a lesser degree. Because the number of college students with disabilities entering higher education has risen considering the potential career decision-making difficulties is imperative. Furthermore, research has found that college students with disabilities are less likely to be employed and have a more difficult time finding employment in comparison to their counterparts (Fogg, Harrington, & McMahon, 2010; Lonnquist 1979; Rosenberg 1978). A literature search on career beliefs and decision-making in college students with disabilities demonstrates preliminary evidence that such a student population may be more vulnerable to career indecision.

Strohmer, Czerlinsky, Menz & Engelkes (1984) found that when considering

individuals with disabilities vocational decision-making concerns, self-appraisal issues were imperative. One of the most common influences when it comes to an individual with disability and career indecision has been found to be negative self-appraisal. Luzzo, Hitchings, Retish, and Shoemaker (1999), examined whether or not there are differences in college students' career decision-making based on an individual having a disability. One hundred and twenty-one college students with and without disabilities participated in this study. After performing four separate one-way analyses of variance (ANOVAs), it was found that college students with disabilities possessed a significantly lower level of decision-making self-efficacy for career decision-making when compared to their counterparts. The researchers suggested based on these findings that more emphasis be placed on addressing the career decision-making process needs in college students with disabilities. Furthermore, it was stated that future research should identify specific factors that are causing decision-making deficits within this population and the various types of disabilities.

Enright investigated the relationship between disability status, career beliefs, and career indecision. Enright explored this relationship by examining correlations between career thoughts and career indecision as well as through hierarchical regression models. Findings suggested that the presence of a disability can play an affect on the relationship between career beliefs and career indecision. More specifically, the existence of a disability had an impact on levels of career indecision either directly or in combination with certain career beliefs relating to a lack of self-efficacy (Enright, 1996).

In contrast to the previously mentioned studies, one research project suggested that there is no difference in career thoughts when an individual possesses a disability.

Strauser, Lustig, Keim, Ketz, & Malesky (2002) examined career thought differences when the existence of a disability status is present. The study used a sample consisting of both college students with and without disabilities. Results indicated that there were no significant differences in career thoughts when compared to their nondisabled counterparts. Because the results of this research were differing from previous authors, limitations were discussed. Such limitations included the fact that the sample consisted mostly of females and there was a significant age difference between the group with disabilities and without disabilities (by fifteen years).

As shown, much research reveals that the presence of dysfunctional career thoughts during the career decision-making process may lead to ineffective decisions and a decreased decision-making capability for both college students with and without disabilities. There is a great deal of literature on college students without disabilities; however, this is not the case for college students with disabilities. Research in this arena is not only severely lacking but also greatly outdated. Thus, the area of college students with disabilities warrants more exploration and attention in order to fill this gap in research. Studies examining the general college student population have begun to explore the impact of personality on career thoughts and decision-making; however, personality factors associated with impaired vocational and career functioning in college students with disabilities are not completely understood.

One personality type that may potentially impact dysfunctional career development is Type D (distressed) personality. Type D personality is defined as the tendency to experience high scores on the stable personality traits, negative affectivity (NA) and social inhibition (SI) (Mols & Denollet, 2010). Individuals with this personality type are known to

be gloomy, feel sad all of the time and have a negative view on the world and themself (high negative affectivity), while at the same time tend to keep these emotions from others due to the fear of other's responses (high social inhibition) (Spindler, Kruse, Zwisler, & Pedersen, 2009). Research on Type D personality distinguishes it from depression and other mood disorders. More specifically, Type D personality is considered a personality construct and has been found to be a chronic risk factor. In contrast, depression is defined as psychopathology and is considered an episodic risk factor (Denollet & Sys, 1996; Pedersen & Denollet, 2006). Studies on Type D personality have increased over the past decade and are continuing to rise due to the risk factors associated with the personality trait.

Individuals with Type D personality have been found to experience higher levels of chronic stress, social and emotional difficulties. These people tend to demonstrate more symptoms of anger, pessimism, low subjective well-being and self-concept, and dissatisfaction with life (Fruyt & Denollet, 2002). Most research that has been done with Type D personality has examined it within a medical context. Most commonly Type D has been associated as a risk factor for cardiovascular medical concerns including cardiovascular disease, chronic heart failure, and myocardial infarction (Denollet J. , 1997); however, it has also been linked to other negative outcomes including diabetes, exhaustion, and work-related problems (Mols & Denollet, 2010).

In a study by Schiffer, Pedersen, Widdershoven, and Denollet (2008), Type D personality effects on chronic heart failure patients were examined. Individuals with Type D personality traits reported more significantly impaired health status when compared to their counterpart's individuals without Type D personality. Type D personality was shown to be an independent predictor of impaired health in these patients. Pedersen, Lingen, de

Jonge, and Scherer (2010) found that the presence of Type D personality traits influence the quality of life for patients with heart failure. In this study, two hundred and fifty one individuals with heart failure were recruited from primary care facilities (N=44). Results indicated that Type D personality was related to poorer quality of life in terms of emotional functioning for these patients compared to the patients without Type D personality traits.

Type D has also been hypothesized to be an independent predictor of long-term mortality in patients with coronary heart disease (CHD). Findings from Denollet and Sys (1996) suggest this to be true. More specifically, it was found that in CHD patients the existence of Type D personality traits was an independent predictor of cardiac and non-cardiac mortality. Thus, it was argued that there should be more of a focus on personality D traits and the association it has to between emotional anguish and death in patients with CHD.

Mols and Denollet (2010) examined the impact of Type D personality among the general population or non-clinical population. In order to do so, the researchers conducted a literature review on studies of Type D personality among this population. Ultimately, the authors chose nineteen articles that met an eleven item standardized checklist. From the collection of studies, it was found that Type D personality negatively impacted both the physical (lower health status, more somatic complaints) and psychological well-being (anxiety, depression, less social support) of the general population. Furthermore, the personality type was associated with disease promoting mechanisms and work related problems including higher levels of burnout, absence-leave, exhaustion, and work-related stress.

Polman, Borkoles, and Nicholls (2010) lead an investigation on whether avoidance

coping and social support acted as a mediator between Type D personality and perceived stress. A sample of three hundred and thirty four first-year undergraduate students was collected consisting of both males (N=180) and females (N=154). Multiple mediation analyses were carried out to investigate the research question. It was found that resignation and withdrawal coping partially mediated the relationship between Type D personality and perceived stress. Social support did not demonstrate mediation in this relationship. Because avoidance coping was associated with increased levels of stress as well as higher burnout, the authors argued that such consequences should be brought to one's awareness. Interventions should include teaching such individuals new coping strategies in order to reduce the degree of stress and burnout.

A study by Mommersteeg, Denollet, and Martens (2012), examined the role of Type D personality in relation to sick leave, burnout, adverse health outcomes, and disability pension. A cross-sectional design was utilized to look at a group of working age people within a Dutch population (n=1,172). This question was analyzed via a univariate logistic regression analysis. Results indicated Type D personality was significantly related to increased burnout, disability pension, and short-term sick leave in comparison to individuals without Type D personality traits.

Recent work within the Work and Disability Lab at the University of Illinois has revealed a relationship between Type D personality and lower levels of health and vocational constructs. More specifically, Wong and Strauser (2012) explored this relationship by gathering data from 255 young healthy adults. Results from MANOVA found that type-D individuals reported significantly lower levels of developmental work personality, lower resolution of psychosocial development, lower satisfaction with life, and

lower health status than individuals without Type D personality. Results suggest that Type D personality may represent a general risk factor associated with poor health and vocational outcomes in general. This results support the previously mentioned study performed by Mols & Denollet (2010).

In summation, individuals with Type D personality have been found to experience higher levels of psychological distress namely chronic stress, health and work-related concerns, and social and emotional difficulties. In addition, research has shown that dysfunctional career thoughts have been related to a variety of psychological stressors including depression, diminished feelings of self-worth, anxiety, and distorted career beliefs and indecision (Saunders, Peterson, Sampson, & Reardon, 2000; Serling & Betz, 1990). In terms of individuals with disabilities, Lustig, Strauser, and Zanskas (2012) investigated and identified the relationship between dysfunctional career thoughts and psychological distress. With such, one can hypothesis that a relationship between Type D personality and dysfunctional career thoughts might exist and is worthy of investigation.

The current study builds off of well-established career development theory as well as previous studies done by psychologists interested in furthering the understanding of vocational decision-making for college students. This project utilizes the knowledge of the impact that dysfunctional career cognitions have on career decision-making for college students in order to broaden the investigation of whether there is a difference in the levels of career thoughts for college students with and without disabilities. Moreover, this study attempts to take the aforementioned research on college students' with and without disabilities cognitions a step further by investigating the role that personality D plays in predicting career thoughts.

CHAPTER 3

METHODOLOGY

Participants

To examine the research questions, a sample of 112 freshman college students from the University of Illinois participated in this study. Of the sample, college students with disabilities were 52 of the participants and college students without disabilities were 60 of the participants. All the participants in the group of individuals with disabilities were receiving services from Disability Resources and Educational Services (DRES). Respondents reported the following primary disabilities: (a) 44% (n=22) developmental (i.e. learning disability, ADHD, and autism spectrum) (b) 24% (n=12) mobility and orthopedic impairments (c) 16% (n=8) chronic medical condition (d) 14% (n=7) hearing or visual impairments (e) 2% (n=1) traumatic brain injury. Those who were diagnosed with psychiatric illness (n=2) were excluded for this study. The mean age of participants with disabilities was 18.2 (SD=0.5). Eighty four percent were Caucasian (n=42), sixteen percent were non-Caucasian (n=8). The number of male participants were 54%, while the number of female participants were 46%. All the participants in the group of individuals without disabilities were recruited from the following two courses: CHLH 274: Drug Use and Abuse and EPSY 220: Career Theory and Practice. The mean age of participants without disabilities was 18.1 (SD=0.4). Sixty two percent were Caucasian (n=37), thirty eight percent were non-Caucasian (n=23). The number of male participants were 33%, while the number of female participants were 67% (see table 1).

Table 1. *Demographic characteristics of samples*

	College Students with Disabilities (n=50)	College Students without Disabilities (n=60)
Gender		
Male	27(54%)	20(33%)
Female	23(46%)	40(67%)
Ethnicity		
Caucasian	42(84%)	37(62%)
Non-Caucasian	8(16%)	23(38%)
Age (years)	18.2 (SD=0.5)	18.1 (SD=0.4)
Disability		
Developmental	44% (n=22)	
Mobility and Orthopedic	24% (n=12)	
Chronic Medical Condition	16% (n=8)	
Hearing or Vision Loss	14% (n=7)	
Traumatic Brain Injury	2% (n=1)	

Procedures

The study investigator and counselors working for Disability Resources and Educational Services recruited college students with disabilities during the initial intake process over the summer and fall semester. College students without disabilities were recruited in during the summer and fall through undergraduate survey courses via the principle investigator. The study investigator and employees of DRES were given packets containing informed consent, demographic form, and research instruments for distribution

to students who met eligibility criteria for this study. All participants were informed in writing that participation was voluntary and that they are free to withdraw without penalty, and that the type, amount, and quality of educational experiences or student services would not be dependent upon their participation in the study. Participants were instructed to return the completed packets directly to the study investigator. Participants were compensated for their participation in the study by receiving $17.00. Data from the survey packets was entered and analyzed using SPSS for Windows version 21.0. A total of 112 packets were distributed to eligible participants.

Instruments

Career Thoughts Inventory (CTI; Sampson et al., 1996) is based on the cognitive information processing theoretical approach to career development and career services (Peterson, Sampson, & Reardon, 1991) and a cognitive therapy approach to mental health and mental health services (Beck, 1976; Beck, Rush, Shaw, & Emory, 1979). For the purpose of the instrument, career thoughts are defined as outcomes of one's thinking about assumptions, attitudes, behaviors, beliefs, feelings, plans, and/or strategies related to career problem solving and decision-making. The CTI consists of 48 items and produces a total score and three construct scales: (a) the Decision-making Confusion scale, consisting of 14 items, measures the extent to which an individual's emotions or lack of decision-making skill knowledge interferes with his or her ability to make a career decision; (b) the Commitment Anxiety scale, consisting of 10 items, examines the impact anxiety has on a person's ability to commit to a career decision and (c) the External Conflict scale, consisting of five items, examines how well the person utilizes input from others and his or her self-perception in decision-making. Respondents use a 4-point rating scale with responses

ranging from 0 (Strongly Disagree) to 3 (Strongly Agree). Examples of items are: (a) I'll never find a field of study or occupation I really like (Decision-making Confusion); (b) My interest are always changing (Commitment Anxiety); (c) I'm getting mixed messages about my career choice from important people in my life (External Conflict). The CTI total scores and three subscale scores were derived by summing the items. The Capability scale was calculated by converting the Decision-making Confusion scale and the Commitment Anxiety scale to Z-scores, adding the Z-scores, and dividing by two. The Complexity scale was calculated by converting the External Conflict scale Z-scores. In this study an internal consistency estimate of .93 was found for the capability scale and .70 for the complexity scale.

DS 14 Type D Personality Scale (Denollet, 2005) is a 14 item self-administered and hand scored instrument designed to assess Type D personality in individuals, including individuals with disabilities and chronic health conditions. Type D personality is defined as a joint tendency toward negative affectivity (NA) and social inhibition (SI), which has been related to poor health and psychosocial outcomes. Fourteen make up the Type D Personality Scale with seven items making up each of the respective subscales (NA=7 items; SI=7 items) with all items scored using an Likert scale ranging from 0 (False) to 4 (True). Negative affectivity is operationalized through questions like "I often feel unhappy" and the social inhibition is operationalized through questions like "I find it hard to start a conversation." Studies have found good factorial structure with the NA and SI items loading between .62 and .82 on their corresponding factors. The NA scale covered dysphoria, worry and irritability; the SI scale covered discomfort in social interactions, reticence, and lack of social poise. The NA and SI scales have demonstrated good internal consistency

(α=.88/.86) stable over a 3-month period (test-retest r=.72/.82) and not dependent on mood or health status. NA correlated positively with neuroticism (r=.68); SI correlated negatively with extroversion (r=-.59/-.65). Scale level factor analysis confirmed the construct validity of the DS14 against the NEO-FFI.

Statistical Analyses

For research question 1, independent t-tests were conducted in order to compare differences on demographic characteristics between DRES and Non-DRES groups. Chi-square statistics were utilized to compare gender and ethnicity across the two groups. MANCOVA was used to compare the CTI total and subscale T-scores across the two groups. It was hypothesized that college students with disabilities will have significantly higher levels of dysfunctional career thoughts when compared to college students without disabilities. For research question 2, multiple variable linear regression models were used to explore the relationship between Type D personality and career thoughts for both college students with disabilities and college students without disabilities combined. It is hypothesized that Type D personality traits will result in elevated levels of dysfunctional career thoughts for all college students regardless of disability status. For research question 3, multiple variable linear regression models were used to explore the relationship between Type D personality and career thoughts for both college students with disabilities and college students without disabilities as two separate groups. It is hypothesized that Type D personality traits will result in elevated levels of dysfunctional career thoughts for college students with disabilities and without disabilities.

CHAPTER 4

RESULTS

In order to compare differences on demographic characteristics between DRES and Non-DRES groups, independent t-tests were conducted and indicated that age was not found to be different between DRES and non-DRES groups (t=1.196, df=86.64, p=0.235). Chi-square statistics indicated that both gender (χ^2=4.760, df=1, p=0.029) and ethnicity (χ^2= 6.721, df=1,p= 0.001) were found to be different across the two groups. In terms of gender, Individuals with disabilities demonstrated more of a balance between males and females (females=46%; males=54%) but with a greater amount of males. In contrast, individuals without disabilities demonstrated less of a balance with a greater amount of females (females=67%; males=33%). For the ethnicity of students with disabilities, eighty four percent were Caucasian (n=42), sixteen percent were non-Caucasian (n=8). In contrast, students without disabilities sixty two percent were Caucasian (n=37), thirty eight percent were non-Caucasian (n=23). In order to compare the CTI total and subscale T-scores across individuals with disabilities and individuals without disabilities, a MANCOVA was conducted. In contrast from what was hypothesized, results on the CTI comparison between the two groups were non-significant. Results indicated that college students with disabilities and without disabilities demonstrate similar scores on the CTI measure. The overall model was found to be not significant (F (4, 103) = 0.331, p= 0.857) after the effect of gender and ethnicity were adjusted. Univariate ANOVAs for CTI total and subscale t-scores also revealed no significant differences between the two groups. The overall model for predicting differences across CTI total was not significant (F (1, 106) =

0.059, p= 0.808). Moreover, the overall model for predicting differences across the CTI subscales were not significant: DMC (F (1, 106) = 0.192, p= 0.662), CA (F (1, 106) = 0.185 p= 0.668), EC (F (1, 106) = 0.334, p= 0.564) (see Table 2).

Table 2. Univariate ANOVAs for total and subscale t-scores of career thought inventory

Score	College Students with Disabilities (n=50) Mean (SD)	College Students without Disabilities (n=60) Mean (SD)	*df*	*F*	*p*	η^2
Total	49.02(11.00)	48.55(10.58)	1	.059	.808	.001
Decision-making Confusion	47.26(10.00)	46.75(9.62)	1	.192	.662	.002
Commitment Anxiety	50.68(12.03)	50.98(12.19)	1	.185	.668	.002
External Conflict	52.24(12.29)	50.20(12.56)	1	.334	.564	.003

Note: *$p \leq 0.05$; ^ $p \leq 0.10$; η^2 = partial eta^2 statistics, [a]: small effect ($\eta^2 = .01$), [b]: medium effect ($\eta^2 = .06$), [c]: large effect ($\eta^2 = .14$).

For research question two, the relationship between Type D personality and career thoughts for the combined group of college students, multiple regression analyses were conducted. These regression models demonstrated that Type D personality traits resulted in elevated levels of dysfunctional career thoughts for the combined group for CTI total, DMC and CA. Type D was not a significant predictor for EC.

Specifically, multiple regression analysis indicated that the overall model for Type D predicting CTI total T-score was significant among the combined group (F (2, 106) = 8.390, p =0.000, adjusted R^2= 12%), in which the Negative Affectivity subscale score (β=0.308, p=0.004) statistically predicted the variance in CTI Total T-score. In examining the impact of Type D on DMC, multiple regression analysis indicated that the overall model was

significant (F (2, 106) = 5.989, p =0.003, adjusted R^2= 8.5%), in which the Negative Affectivity subscale score (β=0.225, p=0.037) predicted the variance in CTI DMC T-score. Results from the multiple regression analysis indicated that the overall model for Type D predicting CTI CA T-score was significant among the combined group (F (2, 106) = 6.802, p =0.002, adjusted R^2= 9.7%), with the Negative Affectivity subscale score (β=0.333, p=0.002) statistically predicted the variance in CTI CA T-score. Results from the multiple regression analysis indicated that the overall model for Type D predicting CTI EC T-score was not significant among the combined group (F (2, 106) = 3.485, p =0.034, adjusted R^2= 4.4%). See table 3 for complete multiple regression analyses for college students with and without disabilities combined.

Table 3. *Multiple regression analyses for predicting the career thoughts among college students with disabilities and without disabilities combined*

Variables	***B***	***SEB***	***β***	***t***	***p***	***Adjusted R^2***
DV: CTI-Total						12%
Social Inhibition	0.196	0.200	0.102	0.979	0.330	
Negative Affect	0.648	0.220	0.308	2.947**	0.004	
Constant	41.151	2.130	41.15	19.568***	0.000	
DV: CTI – DMC						8.5%
Social Inhibition	0.244	0.186	0.139	1.308	0.194	
Negative Affect	0.433	0.205	0.225	2.114*	0.037	
Constant	40.943	1.195		20.900***	0.000	
DV: CTI - CA						9.7%
Social Inhibition	0.019	0.226	0.009	0.083	0.934	
Negative Affect	0.781	0.248	0.333	3.147**	0.002	
Constant	43.515	2.375		18.320***	0.000	
DV: CTI - EC						4.4%
Social Inhibition	0.404	0.239	0.184	1.687^	0.095	
Negative Affect	0.239	0.263	0.099	0.909	0.366	
Constant	45.230	2.517		17.967***	0.000	

Note: DV: Dependent variable; CTI-Total: Career Thought Inventory – Total score; CTI-DMC: Decision-making Confusion; CTI-CA: Commitment Confusion; CTI-EC: External Conflict; ^ p≤ 0.1; * p≤ 0.05; ** p≤ 0.01; *** p≤ 0.001

For research question 3, to examine the impact of Type D according to group differences, regression models were carried out for the disability and non-disability group. Contrary to the hypothesis, Type D personality traits resulted in elevated levels of dysfunctional career thoughts for college students with disabilities only. Multiple regression analysis indicated that the overall model for predicting CTI total T-score was significant among college students with disabilities ($F(2, 47) = 7.146$, $p = 0.002$, adjusted $R^2 = 20.1\%$), with the Negative Affectivity subscale score ($\beta = 0.341$, $p = 0.023$) statistically predicted the variance in CTI Total T-score. The overall model for predicting CTI DMC T-score was significant among college students with disabilities ($F(2, 47) = 5.988$, $p = 0.005$, adjusted $R^2 = 16.9\%$), in which the Social Inhibition subscale score ($\beta = 0.286$, $p = 0.059$) marginally predicted the variance in CTI DMC T-score. The overall model for predicting CTI CA T-score was significant among college students with disabilities ($F(2, 47) = 5.801$, $p = 0.006$, adjusted $R^2 = 16.4\%$), in which the Negative Affectivity subscale score ($\beta = 0.395$, $p = 0.011$) statistically predicted the variance in CTI CA T-score. Results from the multiple regression analysis indicated that the overall model for predicting CTI EC T-score was significant among college students with disabilities ($F(2, 47) = 3.968$, $p = 0.026$, adjusted $R^2 = 10.8\%$), in which the Social Inhibition subscale score ($\beta = 0.282$, $p = 0.072$) marginally predicted the variance in CTI EC T-score. See table 4 for complete multiple regression analyses for college students with disabilities.

Table 4. *Multiple regression analyses for predicting the career thoughts among college students with disabilities*

Variables	*B*	*SEB*	*β*	*t*	*p*	*Adjusted R^2*
DV: CTI-Total						20.1%
Social Inhibition	0.372	0.250	0.217	1.492	0.142	
Negative Affect	0.768	0.327	0.341	2.350*	0.023	
Constant	38.788	3.045		12.739***	0.000	
DV: CTI – DMC						16.9%
Social Inhibition	0.448	0.231	0.286	1.936^	0.059	
Negative Affect	0.487	0.303	0.238	1.607	0.115	
Constant	38.795	2.821		13.750***	0.000	
DV: CTI - CA						16.4%
Social Inhibition	0.171	0.279	0.091	0.612	0.543	
Negative Affect	0.972	0.366	0.395	2.660*	0.011	
Constant	40.542	3.406		11.904***	0.000	
DV: CTI - EC						10.8%
Social Inhibition	0.543	0.294	0.282	1.843^	0.072	
Negative Affect	0.387	0.386	0.154	1.002	0.321	
Constant	43.768	3.593		12.183***	0.000	

Note: DV: Dependent variable; CTI-Total: Career Thought Inventory – Total score; CTI-DMC: Decision-making Confusion; CTI-CA: Commitment Confusion; CTI-EC: External Conflict; ^ $p \leq 0.1$; *$p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$

In contrast the college students with disabilities, the overall model for predicting CTI total T-score was not significant among college students without disabilities ($F(2, 56)=2.756$, $p=0.072$, adjusted $R^2=5.7\%$). The overall model for predicting CTI DMC T-score was not significant among college students without disabilities ($F(2, 56)= 1.733$, $p=0.186$, adjusted $R^2= 2.5\%$). In examining the impact of Type D on CTI CA, was not significant among college students without disabilities ($F(2, 56)= 2.315$, $p=0.108$, adjusted $R^2= 4.3\%$). Finally, the overall model for predicting CTI EC T-score was not significant among college students without disabilities ($F(2, 56)= 0.449$, $p=0.640$, adjusted $R^2= -1.9\%$). See table 5 for complete multiple regression analyses for college students without disabilities.

Table 5. *Multiple regression analyses for predicting the career thoughts among college students without disabilities*

Variables	*B*	*SEB*	*β*	*t*	*p*	*Adjusted R^2*
DV: CTI-Total						5.7%
Social Inhibition	-0.151	0.336	-0.069	-0.449	0.655	
Negative Affect	0.662	0.306	0.332	2.163*	0.035	
Constant	43.636	2.953		14.776***	0.000	
DV: CTI – DMC						2.5%
Social Inhibition	-0.135	0.313	-0.067	-0.431	0.668	
Negative Affect	0.498	0.285	0.272	1.744^	0.087	
Constant	43.333	2.754		15.732***	0.000	
DV: CTI - CA						4.3%
Social Inhibition	-0.282	0.384	-0.114	-0.735	0.465	
Negative Affect	0.731	0.350	0.323	2.089*	0.041	
Constant	46.390	3.375		13.744***	0.000	
DV: CTI - EC						1.9%
Social Inhibition	0.074	0.407	0.029	0.181	0.857	
Negative Affect	0.249	0.371	0.107	0.672	0.504	
Constant	46.950	3.582		13.106***	0.000	

Note: DV: Dependent variable; CTI-Total: Career Thought Inventory – Total score; CTI-DMC: Decision-making Confusion; CTI-CA: Commitment Confusion; CTI-EC: External Conflict; ^ $p \leq 0.1$; *$p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$

CHAPTER 5

DISCUSSION

The purpose of this study was to first examine the difference in career readiness between college students with disabilities and without disabilities. Results indicated that there was no significant difference between the two groups in terms of career readiness. However, in addressing the second goal of this study, whether Type D personality traits serve as predictors of career readiness, results were significant for predicting CTI Total, DMC, and CA but not for EC in the combined group of college students. Moreover, the final purpose of this study was to examine the impact that Type D personality traits have on career readiness according to group differences, disability and non-disability status. Results were significant for predicting CTI Total, DMC, CA and EC for college students with disabilities only.

As stated above, one goal of this study was to compare the dimension of career readiness for college students with and without disabilities. The results indicate that there was no difference in levels of career readiness between college students with disabilities and college students without disabilities. These findings are inconsistent with prior research, which has shown that individuals with disabilities have higher levels of career decision-making difficulties when compared to college students without disabilities (Enright, 1996; Luzzo, Hitchings, Retish, & Shoemaker, 1999; Strohmer, Czerlinsky, Menz, & Engelkes, 1984). There are several ways to interpret these surprising results. First, the operationalized definitions of the cognitive processes related to career decision-making and career thoughts were different across studies. As an example, the study by Enright

operationalized career decision-making in terms of self-efficacy. In our study, the cognitive processes related to career decision-making and career thoughts were operationalized in terms of dysfunctional thinking. The fact that variables were operationalized differently suggests that our results should be interpreted with caution when comparing them to other studies. Second, due to limitations on our data collection, we were unable to separate individuals with disabilities based on the type of disability present. Therefore, we could not examine the effect that specific types of disabilities had on career thoughts like that of prior studies. Third, data collection occurred at the during the fall semester of the students' freshman year. One can argue that this does not leave enough time for individuals to experience or to be exposed to career related services or career development opportunities on campus. Therefore, both groups of students may not have had an adequate amount of time on campus in order to be able to assess the development or lack of development of student's career thoughts. Finally, this study gathered data for the group of college students without disabilities via a career exploration course (EPSY 220: Career Theory and Practice) offered at the University of Illinois. Because the nature of this course is to help individuals with the career decision-making process, there is a better chance that the students who chose to take this course might be struggling with making a career decision. Thus, increasing the chance that this group of students was experiencing more dysfunctional career thoughts than the average population of college students without disabilities.

Results for research question two indicated that Personality D traits had an adverse effect on career thoughts for both individuals with and without disabilities as a whole. More specifically, when the groups were combined the presence of negative affectivity had an adverse effect on overall career thoughts, decision-making confusion, and commitment

anxiety. These findings suggest that Type D personality traits are related to dysfunctional career thoughts and that negative affectivity is the trait that is making a unique attribution to the dysfunctional career thoughts. According to Type D personality theory, Individuals who experience high negative affect can be characterized as gloomy, feeling sad all of the time and having a negative view on the world and self. Decision-making confusion measures an individual's ability to understand and maintain the decision-making process. Individuals high in negative affect typically feel sad and have a negative perspective on themself and life. Thus, they are likely to have a negative outlook on their career decision-making process because this involves thinking about the self and one's future life outlook.

The commitment anxiety scale measures the impact that anxiety has on a person's ability to commit to a career decision. The results indicate that negative affectivity had an adverse effect on commitment anxiety scale. This finding suggests that an individual who experiences sadness and a negative self and life perspective is likely to lack an ability to commit to a career decision and to experience more anxiety about this decision. These results provide a rational for investigating research question three and determining the impact that Type D personality traits have on individuals with disabilities in comparison to their counterparts. As shown, Type D personality traits have a relationship with dysfunctional career thoughts for college students combined. Upon establishment of this relationship, one must be prudent by taking the investigation a step further and examining group differences in terms of the impact of Type D traits on dysfunctional career thoughts.

Results for research question three indicate that in college students with disabilities the presence of Personality D traits had an adverse effect on career thoughts. More specifically, in college students with disabilities the presence of negative affectivity had an

adverse effect on overall career thoughts as well as commitment anxiety. As mentioned above, commitment anxiety measures a person's anxiety toward making a career decision and the specific outcomes of that decision. Individuals with high negative affect tend to be sad and have a negative perspective of themself and their life. This finding suggests that college students with disabilities who experience sadness and a negative self and life perspective are likely to lack an ability to commit to a career decision and to experience more anxiety in terms of making this decision. For this group, it is not surprising that they experience difficulties with commitment and increased anxiety when faced with a career decision. Individuals with disabilities tend to experience lower expectations, which can take the form of sympathy, kindness, or generosity. As a result, this group will receive little feedback in terms of their skills, capabilities etc. keeping them feeling inferior and dependent (Smart, 2001). Being placed in an environment in which they have to begin to contemplate not only a complex decision, but also a decision that involves having to consider their own skills, interests and what the choice means for their future is likely to result in increased anxiety.

For college students with disabilities the presence of social inhibition had an adverse effect on decision-making confusion and external conflict. In contrast to the results of question 2, social inhibition is the trait uniquely contributing to decision-making confusion for college students with disabilities. Social inhibition can be identified as inhibiting negative emotions as a means of avoiding disapproval or rejection. This finding suggests that college students with disabilities who inhibit their negative emotions are likely to experience career decision-making confusion while withholding these thoughts and feelings from others. For this group, it makes sense that this trait accounts for more of

the variance in terms of decision-making confusion. As discussed in the introduction, individuals with disabilities often experience overprotection from parents and/or other family members (Yura, 1983). Overprotection deprives an individual of a sense of independence and it inadvertently promotes dependence on others. Repercussions of overprotection include the following: lower self-esteem, feelings of being less capable, and reduced opportunity for growth (Smart, Disablity, Society, and the Individual, 2001). Thus, one can see how overprotection and dependence on others could be related to this trait of social inhibition or the process of inhibiting one's negative emotions in order to avoid disapproval. If the individual with a disability has previously relied on their caretaker for all things, they may be afraid to disappoint them or feel insecure in their own decisions and therefore struggle with making a career decision.

External conflict measures an individual's ability to integrate other people's opinions about their career choice effectively while also taking into consideration their personal responsibility for their career choice. The results indicate that social inhibition has an adverse effect on external conflict. This finding suggests that college students with disabilities who inhibit their negative emotions are likely to experience external conflict when faced with integrating other people's opinions with their own. This outcome is not surprising in the sense that if an individual is unable to discuss struggles they may be experiencing to other people it is likely that their thoughts and feelings will not be addressed or worked through and conflict will arise. This group is especially vulnerable to struggling with this integration due to the negative societal attitudes that they face as a result of having a disability. Individuals who experience these pervasive negative attitudes often experience feelings of worthlessness and inadequacy. Therefore, one can imagine the

struggle they might experience integrating other people's opinions and their own. They might perceive their own capabilities as lesser than others view them and not be able to address these concerns because they tend to inhibit their negative emotions.

Results for college students without disabilities indicated that personality D characteristics were non-significant in predicting dysfunctional career thoughts. In contrast, study findings indicate that individuals with disabilities and personality D characteristics may be at a particular risk for developing dysfunctional career thoughts. Factors that could be contributing to the potentially dysfunctional career thoughts may be due to overprotection, lower expectations, and societal attitudes that one may encounter as a result of having a disability. The findings highlight the need for career counseling interventions to be geared toward attending to Type D personality traits (i.e. negative affect and social inhibition) with the goal of improving the vocational outcomes for individuals with disabilities. In addition, it can be argued that individuals may benefit from psychosocial interventions that are aimed toward improving their coping skills in order to decrease potential work-related problems when they enter into the workforce. More specifically, addressing individuals negative affectivity could reduce problems related to overall career thoughts but also commitment anxiety in particular. Addressing an individual's tendency for social inhibition could help with problems related to overall career thoughts and more specifically, decision-making confusion and external conflict. Issues related to dysfunctional career thoughts in individuals with disabilities who possess personality D traits have not been examined in prior research so it will be important to replicate this study with a larger sample population to determine if the results can be duplicated.

Limitations

Conclusions regarding the results of this study are limited by the following considerations. First, this study utilized a cross sectional design which limits the ability to determine any casual link between the variables. This design does not inform us of all the factors of age or cohort effects. Second, for this study the sample size was relatively small consisting of only 50 college students with disabilities and 60 college students without disabilities. Furthermore, for the college students without disabilities the sample contained 67% women. As a consequence, our findings may not be representative and generalizable to the college students with disabilities and without disabilities populations as a whole.

Third, our comparison groups of individuals with and without disabilities are limited by the fact it is disproportionately Caucasian college students, which may indicate potential differences related to cultural and socio-economic background as well as educational competency. Future studies should include a more culturally diverse group, which could better capture the impact that personality D traits are having on the diverse population of college student's career thoughts.

Fourth, the data was collected during the months of July through September, which provides a limited amount of time in which an individual has been exposed to the college environment as well as career related supports and events that can lead to the development of career thoughts. Future studies should collect data over the course of the individual's college career in order to capture the long term effects of Personality D traits on college students after having had time to experience various college career related supports and exploratory experiences.

Fifth, the data that was collected sampled a group consisting of multiple types of disabilities. It is possible that the individual's type of disability might result in more or less dysfunctional career thoughts. Examining the effects of having a particular type of disability on career thoughts should be considered in future studies. Finally, there are limitations as a result of the fact that this study was completed via self-report measures.

Implications

The importance of gaining meaningful employment following college has been discussed. Work contributes to an overall sense of self-esteem and self-determination, opportunities for advancement, and opportunities for social support, all necessary components of psychological health (Bluestein, 2008; Neff, 1986). One factor shown to faciliate gaining meaningful employment is improved career decision-making (Levinson, Ohler, Caswell, & Kiewra 1998). Dysfunctional career thoughts and negative emotions have been found to inhibit the decision-making process (Saka, Gati, & Kelly, 2008). This study provides evidence that Type D personality and dysfunctional career thoughts are related. Interventions geared toward reducing dysfunctional career thoughts and/or addressing Type D personality concerns can assist in the goal of being career ready in order to attain employment following college.

The current study provides evidence that for college students with disabilities and Type D personality traits dysfunctional career thoughts related to decision-making confusion, commitment anxiety, and external conflict may co-exist. With such, interventions focused on helping the college student improve with a disability improve their understanding of the impact that negative affectivity has on the career decision-making process may assist in reducing the individual's decision-making confusion. With

respect to addressing negative affectivity, it would be appropriate for practitioners to engage in psychosocial education with the goal of helping individuals understand this personality trait and the impact that it has on various aspects of their life including their career thoughts. Moreover, the practitioner could aid the individual in identifying times in which they may be engaging in negative affect or negative perspective taking. With this, the individual could develop ways to manage their negative affect with appropriate coping skills and/ or cognitive reframing skills. Furthermore, interventions addressing the college student's tendencies for social inhibition may help improve their commitment anxiety and external conflict. With respect to social inhibition, the practitioner can focus on empowering and validating the student as a means of demonstrating that their thoughts and feelings are worthy and legitimate. A positive and open interaction with the practitioner could perhaps serve as an example of what other interactions can be like in terms of having a positive open discussion of emotions. A counselor could also provide the student with psychoeducation on assertiveness skills as a means teaching the individual how to express themselves in circumstances they might view as more difficult. Together, empowerment and assertiveness training might aid the student in managing and becoming aware of their tendency for social inhibition.

In order to understand the unique needs of this group, it appears that one cannot screen for concerns based on the individual's disability status alone. According to these results, there is a need to screen for Type D personality traits when working with this population. If we don't address the role of Type D personality traits and it's relation to dysfunctional career thoughts, practitioners might minimize the effectiveness of career services being provided to this group of college students with disabilities.

Future Directions

In terms of future directions, first it would be important to acquire a larger sample size. In this way, one could increase the external validity or the ability to generalize the results to the larger population. One way to increase the number of participants would be by offering a larger incentive for the student's participation. With such, it is likely that the number of individuals who choose to participate might increase. In addition, with an increase in pay, there is the potential to get those who are actually interested in the study and it's outcome but also those people who might not have taken the time to participate had they not been paid.

Second, future studies should specify the type of disability being looked at in order to see if there is a difference between the samples when the type of disability is specified. More specifically, the disability type should be separated into stable versus variable disabilities. One can surmise that there might be varying psychological distress based on these two specifications. For example, those with a stable disability might not have as much distress because they are certain of their disability and the impact it has on their life. In contrast, those with a chronic yet variable illness might have to deal with ups and downs of their disease (inconsistencies), which could potentially cause more distress in the fact that things are constantly changing and out of their control.

Third, in order to get a better understanding of the relationship between dysfunctional career thoughts and Type D personality traits within the disability population, replication of this study across various settings is necessary. Thus far, a group of college students has been examined at the University of Illinois. In order to examine how this study captures what other college students look like in differing locations, samples

should be gathered and examined from universities in other parts of the country including in the North, West, and East. Furthermore, the various settings to be examined should include universities that are inner city, rural, residential in nature and commuter schools. In this way, there is a greater chance of capturing whether or not this relationship exists across other context not just in this one population at the University of Illinois.

Fourth, the study sample included only freshman college students. Examining college students with disabilities as freshman alone has the potential to complicate and muddle the understanding of the post-secondary to work transition. This could be problematic in that freshman are brand new to the college life and may not have had the time to engage in coursework and career related outreach experiences that can help with their career development process. Thus, future directions should explore longitudinally the trajectory of the college students in order to investigate their career related outcome based off their exposure to the college experience including classes and career related outreach opportunities with the goal of bettering their transition from post-secondary education into the work place.

Conclusions

The results of this study found that college students with disabilities possessing personality D traits experience elevated levels of dysfunctional career thoughts. The findings provide initial evidence for the need of vocational counseling services to assess and address personality D characteristics (i.e. negative affect and social inhibition). In the case that these findings can be replicated, suggestions may include advising career counseling services to focus on college students with disabilities that are demonstrating high negative affectivity rather than focusing on disability status like people might be

inclined to focus on. If this is the case, findings suggest that interventions may want to focus on this aspect in order to reduce the elevated level of dysfunctional career thoughts overall and to reduce commitment anxiety. In order to reduce decision-making confusion and external conflict, individuals with elevated levels of social inhibition could use supports to improve their tendencies for social inhibition. By doing such, there is the possibility to reduce potential work related problems when such individuals enter into the workforce.

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APPENDIX A

INFORMED CONSENT

Purpose and Procedures: The purpose of this research is to conduct a study to compare the levels of career readiness and vocational identity experienced by college students with disabilities (CSD) and their counterparts who do not have a disability. You will be asked to complete a demographic form, contact information form, and a total of 7 career assessment surveys today in this location and it is expected to take approximately 30-60 minutes. The primary investigator is Susann Heft Sears, M.Ed., Disability Specialist, with the Division of Disability Resources and Educational Services (DRES) at the University of Illinois at Urbana Champaign. She can be reached at 217-333-4602 or sheft@illinois.edu.

Voluntariness: Your participation in this research is voluntary and you must be 18 years of age or older. You may refuse to participate, discontinue participation, or skip any questions. Your decision to participate will not affect your services or participation in any programming at DRES. Your participation is strictly voluntary and that no participating or choosing to terminate involvement in the project will not impact your current DRES services, future participation with DRES, or your student standing at the University of Illinois. You will also have the right to discontinue participation at any time.

Risks and Benefits: You may experience some mild, temporary discomfort related to your thoughts regarding employment. If you experience some discomfort, you may contact Susann Heft Sears at the University of Illinois, DRES at 217-333-4602 or sheft@illinois.edu. Benefits expected from this study may include increased awareness of your current work behaviors and attitudes about work. Your participation will also help researchers and clinicians gain a better understanding of employment readiness in young adult college students with disabilities and may lead to improved treatment interventions.

Compensation: You will receive $16.66 for each time you participate in our year-long data collection for this study. There are a total of 3 assessment periods, you can make a total of $50 for participating.

Confidentiality: Only members of the research team will have access to research results and there will be no personally identifying information. In the event of publication of this research, no personally identifying information will be disclosed. To make sure your participation is confidential, please do not provide any personally identifying information on the questionnaires. This consent form and contact information form will both be stored in a locked cabinet separately from the attached surveys.

Who to Contact with Questions: Questions about this research study should be directed to the primary investigator and person in charge, Susann Heft Sears at 217-333-4602 or sheft@illinois.edu or her PhD Advisor, Dr. David R. Strauser, at 217-244-3936 or strauser@illiniois.edu. Questions about your rights as a research participant should be directed to the University of Illinois at Urbana Champaign Institutional Review Board Office at 217-333-2670; irb@illinois.edu. You will receive a copy of this consent form.

I certify that I have read this form and volunteer to participate in this research study and "I am 18 years of age or older."

_____ _____

(Print) Name (Signiture) Name

APPENDIX B

DEMOGRAPHICS SURVEY

Code Number:
Your Age: _____ (years) **Gender:** _____ Male _____ Female

Year in School:
____ Freshman ____ Sophomore ____ Junior ____ Senior ____ Graduate ____ Other

College/Dept.: _____ **Major:** _____

Ethnicity:

_____ African American _____ White / Non-Hispanic _____ Hispanic

_____ Native American/Alaskan Native _____Asian/Pacific Islander _____ Other:_____
(Please specify).

Do you have a disability?
Yes (complete the 3 questions below) **No** (move on to next question)

1) Please specify your disability(ies): _____
2) Age of onset of Disability(ies): _____
3) Are you registered with the U of I's Disability Services office (DRES)? Yes No
If Yes, please indicate the date you were first registered for DRES Services: _____
(month, year)

Are you currently employed? Yes No
If you answered Yes, are you employed: A) Full-time B) Part-time
If you answered No, have you ever been employed? Yes No

High School Attended: _____
(Name of High School, City, State)

Family's Annual Income: Please check ONE (Please answer to the best of your ability).

____ $0-$25,000 ____ $25,000-$50,000 ____ $50,000-$75,000

____ $75,000-$100,000 ____ $100,000-$250,000 ____ $250,000-$400,000

____ $400,000-$550,000 ____ $550,000 and Above

APPENDIX C

CAREER THOUGHTS INVENTORY

The questionnaire used to gather the data on career thoughts that has been used in this thesis may be found on pages 75-78.

Career Thoughts Inventory™ (CTI™) Test Booklet

James P. Sampson, Jr., PhD
Gary W. Peterson, PhD
Janet G. Lenz, PhD
Robert C. Reardon, PhD
Denise E. Saunders, MS

This inventory has been developed to help people learn more about the way they think about career choices. Inside this booklet you will find statements describing thoughts that some people have when considering career choices. Please answer each statement openly and honestly as it describes you.

Directions:

Read each statement carefully and indicate the degree to which you agree or disagree with each item by circling the answer that best describes you. Do not omit any items.

SD = Strongly Disagree **D = Disagree** **A = Agree** **SA = Strongly Agree**

Circle **SD** if you strongly disagree with the statement.	(SD)	D	A	SA
Circle **D** if you disagree with the statement.	SD	(D)	A	SA
Circle **A** if you agree with the statement.	SD	D	(A)	SA
Circle **SA** if you strongly agree with the statement.	SD	D	A	(SA)

If you make a mistake or change your mind, DO NOT ERASE! Make an "X" through the incorrect response and then draw a circle around the correct response.

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[redacted]

1. No field of study or occupation interests me.	SD	D	A	SA
2. Almost all occupational information is slanted toward making the occupation look good.	SD	D	A	SA
3. I get so depressed about choosing a field of study or occupation that I can't get started.	SD	D	A	SA
4. I'll never understand myself well enough to make a good career choice.	SD	D	A	SA
5. I can't think of any fields of study or occupations that would suit me.	SD	D	A	SA
6. The views of important people in my life interfere with choosing a field of study or occupation.	SD	D	A	SA
7. I know what I want to do, but I can't develop a plan for getting there.	SD	D	A	SA
8. I get so anxious when I have to make decisions that I can hardly think.	SD	D	A	SA
9. Whenever I've become interested in something, important people in my life disapprove.	SD	D	A	SA
10. There are few jobs that have real meaning.	SD	D	A	SA
11. I'm so frustrated with the process of choosing a field of study or occupation I just want to forget about it for now.	SD	D	A	SA
12. I don't know why I can't find a field of study or occupation that seems interesting.	SD	D	A	SA
13. I'll never find a field of study or occupation I really like.	SD	D	A	SA
14. I'm always getting mixed messages about my career choice from important people in my life.	SD	D	A	SA
15. Even though there are requirements for the field of study or occupation I'm considering, I don't believe they apply to my specific situation.	SD	D	A	SA
16. I've tried to find a good occupation many times before, but I can't ever arrive at good decisions.	SD	D	A	SA
17. My interests are always changing.	SD	D	A	SA
18. Jobs change so fast it makes little sense to learn much about them.	SD	D	A	SA
19. If I change my field of study or occupation, I will feel like a failure.	SD	D	A	SA
20. Choosing an occupation is so complicated, I just can't get started.	SD	D	A	SA
21. I'm afraid I'm overlooking an occupation.	SD	D	A	SA
22. There are several fields of study or occupations that fit me, but I can't decide on the best one.	SD	D	A	SA
23. I know what job I want, but someone's always putting obstacles in my way.	SD	D	A	SA
24. People like counselors or teachers are better suited to solve my career problems.	SD	D	A	SA
25. Even though I've taken career tests, I still don't know what field of study or occupation I like.	SD	D	A	SA

[redacted]

26. My opinions about occupations change frequently.	SD	D	A	SA
27. I'm so confused, I'll never be able to choose a field of study or occupation.	SD	D	A	SA
28. The more I try to understand myself and find out about occupations, the more confused and discouraged I get.	SD	D	A	SA
29. There are so many occupations to know about, I will never be able to narrow down the list to only a few.	SD	D	A	SA
30. I can narrow down my occupational choices to a few, but I don't seem to be able to pick just one.	SD	D	A	SA
31. Deciding on an occupation is hard, but taking action after making a choice will be harder.	SD	D	A	SA
32. I can't be satisfied unless I can find the perfect occupation for me.	SD	D	A	SA
33. I get upset when people ask me what I want to do with my life.	SD	D	A	SA
34. I don't know how to find information about jobs in my field.	SD	D	A	SA
35. I worry a great deal about choosing the right field of study or occupation.	SD	D	A	SA
36. I'll never understand enough about occupations to make a good choice.	SD	D	A	SA
37. My age limits my occupational choice.	SD	D	A	SA
38. The hardest thing is settling on just one field of study or occupation.	SD	D	A	SA
39. Finding a good job in my field is just a matter of luck.	SD	D	A	SA
40. Making career choices is so complicated, I am unable to keep track of where I am in the process.	SD	D	A	SA
41. My achievements must surpass my mother's or father's or my brother's or sister's.	SD	D	A	SA
42. I know so little about the world of work.	SD	D	A	SA
43. I'm embarrassed to let others know I haven't chosen a field of study or occupation.	SD	D	A	SA
44. Choosing an occupation is so complex, I'll never be able to make a good choice.	SD	D	A	SA
45. There are so many occupations that I like, I'll never be able to sort through them to find ones I like better than others.	SD	D	A	SA
46. I need to choose a field of study or occupation that will please the important people in my life.	SD	D	A	SA
47. I'm afraid if I try out my chosen occupation, I won't be successful.	SD	D	A	SA
48. I can't trust that my career decisions will turn out well for me.	SD	D	A	SA

Directions: Write the raw scores for CTI Total, DMC, CA, and EC in the spaces beneath the appropriate profile. Circle each raw score on the profile. Then draw lines connecting DMC, CA, and EC.

Profile for Adults

T score	Raw scores: CTI Total	DMC	CA	EC	%ile
≥80	[illegible]	[illegible]	[illegible]	[illegible]	99
79	[illegible]	[illegible]	[illegible]	[illegible]	99
78	[illegible]	[illegible]	[illegible]	[illegible]	99
77	[illegible]	[illegible]	[illegible]	[illegible]	99
76	[illegible]	[illegible]	[illegible]	[illegible]	99
75	[illegible]	[illegible]	[illegible]	[illegible]	99
74	[illegible]	[illegible]	[illegible]	[illegible]	99
73	[illegible]	[illegible]	[illegible]	[illegible]	99
72	[illegible]	[illegible]	[illegible]	[illegible]	99
71	[illegible]	[illegible]	[illegible]	[illegible]	99
70	[illegible]	[illegible]	[illegible]	[illegible]	99
69	78–79		20	7	97
68	75–77	21	19		96
67	73–74	20			95
66	71–72		18		95
65	69–70	19			93
64	67–68	18	17	6	92
63	64–66	17			90
62	62–63		16		88
61	60–61	16			86
60	58–59	15	15	5	84
59	56–57				82
58	53–55	14	14		79
57	51–52	13	13		76
56	49–50				73
55	47–48	12	12	4	69
54	45–46	11			66
53	42–44	10	11		62
52	40–41				58
51	38–39	9	10		54
50	36–37	8		3	50
49	34–35		9		46
48	31–33	7	8		42
47	29–30	6			38
46	27–28		7	2	34
45	25–26	5			31
44	22–24	4	6		27
43	20–21	3			24
42	18–19		6		21
41	16–17	2		1	18
40	14–15	1	4		16
39	11–13				14
38	9–10	0	3		12
37	7–8		2		10
36	5–6			0	8
35	3–4		1		7
34	0–2				5
33			0		4
32					4
31					3
30					2
29					2
28					1
≤27					1

Raw scores ____ ____ ____ ____

Profile for College Students

T score	Raw scores: CTI Total	DMC	CA	EC	%ile
≥80	[illegible]	[illegible]	[illegible]	[illegible]	99
79	[illegible]	[illegible]	[illegible]	[illegible]	99
78	[illegible]	[illegible]	[illegible]	[illegible]	99
77	[illegible]	[illegible]	[illegible]	[illegible]	99
76	[illegible]	[illegible]	[illegible]	[illegible]	99
75	[illegible]	[illegible]	[illegible]	[illegible]	99
74	[illegible]	[illegible]	[illegible]	[illegible]	99
73	[illegible]	[illegible]	[illegible]	[illegible]	99
72	[illegible]	[illegible]	[illegible]	[illegible]	99
71	[illegible]	[illegible]	[illegible]	[illegible]	99
70	[illegible]	[illegible]	[illegible]	[illegible]	99
69	86–87	25	23		97
68	84–85	24			95
67	82–83	23	22	7	95
66	80–81				95
65	78–79	22	21		93
64	76–77	21			92
63	74–75	20	20		90
62	72–73			6	88
61	69–71	19	19		86
60	67–68	18			84
59	65–66		18		82
58	63–64	17	17	5	79
57	61–62	16			76
56	59–60	15	16		73
55	57–58				69
54	55–56	14	15		66
53	53–54	13		4	62
52	51–52	12	14		58
51	49–50				54
50	46–48	11	13		50
49	44–45	10		3	46
48	42–43	9	12		42
47	40–41				38
46	38–39	8	11		34
45	35–37	7	10		31
44	34–35	6		2	27
43	32–33		9		24
42	30–31	5			21
41	28–29	4	8		18
40	26–27	3			16
39	23–25		7	1	14
38	21–22	2			12
37	18–20	1	6		10
36	17–18				8
35	15–16	0	5	0	7
34	13–14				5
33	11–12		4		4
32	9–10				4
31	7–8		3		3
30	5–6		2		2
29	3–4				2
28	1–2		1		1
≤27	0		0		1

Raw scores ____ ____ ____ ____

Profile for High School Students

T score	Raw scores: CTI Total	DMC	CA	EC	%ile
≥80	[illegible]	[illegible]	[illegible]	[illegible]	99
79	[illegible]	[illegible]	[illegible]	[illegible]	99
78	[illegible]	[illegible]	[illegible]	[illegible]	99
77	[illegible]	[illegible]	[illegible]	[illegible]	99
76	[illegible]	[illegible]	[illegible]	[illegible]	99
75	[illegible]	[illegible]	[illegible]	[illegible]	99
74	[illegible]	[illegible]	[illegible]	[illegible]	99
73	[illegible]	[illegible]	[illegible]	[illegible]	99
72	[illegible]	[illegible]	[illegible]	[illegible]	99
71	[illegible]	[illegible]	[illegible]	[illegible]	99
70	[illegible]	[illegible]	[illegible]	[illegible]	99
69	87–88	25		8	97
68	85–86		21		95
67	83–84	24			95
66	81–82	23	20		95
65	79–80			7	93
64	77–78	22	19		92
63	75–76	21			90
62	73–74	20	18		88
61	71–72				86
60	69–70	19	17	6	84
59	67–68	18			82
58	65–66		16		79
57	63–64	17			76
56	61–62	16	15		73
55	59–60			5	69
54	56–58	15	14		66
53	54–55	14			62
52	52–53	13	13		58
51	50–51			4	54
50	48–49	12	12		50
49	46–47	11			46
48	44–45		11		42
47	42–43	10			38
46	40–41	9	10	3	34
45	38–39				31
44	36–37	8			27
43	34–35	7	9		24
42	32–33	6			21
41	30–31		8	2	18
40	28–29	5			16
39	26–27	4	7		14
38	24–25				12
37	22–23	3	6	1	10
36	20–21	2			8
35	18–19	1	5		7
34	15–17				5
33	13–14	0	4		4
32	11–12			0	4
31	9–10		3		3
30	7–8				2
29	5–6		2		2
28	3–4				1
≤27	0–2		0–1		1

Raw scores ____ ____ ____ ____

APPENDIX D

PERSONALITY D ASSESSMENT

Code Number:

Personality D

Below are a number of statements that people often use to describe themselves. Please read each statement and then **circle** the appropriate number rating next to that statement to indicate your answer. The rating scale is listed below. There are no right or wrong answers: Your own impression is the only thing that matters.

0 = False
1 = Rather False
2 = Neutral
3 = Rather True
4 = True

1.	I make contact easily when I meet people……..	0	1	2	3	4
2.	I often make a fuss about unimportant things……..	0	1	2	3	4
3.	I often talk to strangers…….	0	1	2	3	4
4.	I often feel unhappy……..	0	1	2	3	4
5.	I am often irritated……..	0	1	2	3	4
6.	I often feel inhibited in social interactions……..	0	1	2	3	4
7.	I take a gloomy view of things……..	0	1	2	3	4
8.	I find it hard to start a conversation……..	0	1	2	3	4
9.	I am often in a bad mood……..	0	1	2	3	4
10.	I am a closed kind of person……..	0	1	2	3	4
11.	I would rather keep other people at a distance……..	0	1	2	3	4
12.	I often find myself worrying about something……..	0	1	2	3	4
13.	I am often down in the dumps……..	0	1	2	3	4
14.	When socializing, I don't find the right things to talk about……..	0	1	2	3	4